ANNALES DU SERVICE DES ANTIQUITÉS DE L'ÉGYPTE. Tome LXI



RÈPUBLIQUE ARABE D'EGYPTE

MINISTÈRE DE LA CULTURE ET INFORMATION

SERVICE DES ANTIQUITÉS DE L'ÉGYPTE

ANNALES
DU SERVICE DES ANTIQUITÉS
DE L'ÉGYPTE



TOME LXI

Le Tome LXI est Complet

LE CAIRE
Organisme Général
des Imprimeries Gouvernementales
1973



ANNALES

DU SERVICE DES ANTIQUITÉS

DE L'ÉGYPTE



RÉPUBLIQUE ARABE D'EGYPTE

MINISTÈRE DE LA CULTURE ET INFORMATION

SERVICE DES ANTIQUITÉS DE L'EGYPTE

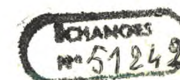
ANNALES

DU SERVICE DES ANTIQUITÉS DE L'ÉGYPTE

TOME LXI



LE CAIRE
Organisme Général
des Imprimeries Gouvernementales
1973



ASFÛNUL-MAṬÂʿNEH *SONDAGES*

BY

HASSAN S.K. BAKRY

IV

Excavations were resumed on August 4, 1967 in the area bisected by the two main roads of Village 4 northwards and of the new villages of Tômâs and ʿAfeyeh westwards.

Work started W. of the road to Village No. 4 and S. and W. of the areas excavated in 1965 and 1966 (Pl. I) Fourteen tombs were mainly excavated. As usual, they had been dug in the mud layers of the soil and then deep into the sandy layer, and were almost all oval in shape (Pl. II).

Tomb No. 1 (Pl. III, *a*) measuring 120 × 85 cm. had a recess closed by a mud-brick wall, and contained the mummies of a man, a woman and a child. They lay on their backs with their arms crossed on their chests and thier heads turned to the west. On the man's chest were small beads of bluish faïence, he was almost bald and measured about 167 cm. long.

Tomb No. 2 which was similar to tomb No. 1 had also a recess closed by a mud-brick wall. Near the entrance of the recess were found human skulls. There was also the lower part of a plastered and painted wooden coffin. Nothing else was found there.

Tomb No. 3 measuring 2. 35 × 2 × 1.20 m. lay south of tomb No. 2 ; it had a recess 99 cm. long ; each of its bricks measured about 32 × 16 × 10 cm. There were two mummies, each about 160 cm. long, one of them having blondish hair.

Tomb No. 4 (Pl. III, *b*) measured about 3.5 × 2.8 × 1.10 m. and its recess sheltered four wooden coffins in very bad condition on account of the effects of moisture. Each coffin measured about 180 × 45 cm. The heads of the decayed mummies were turned westwards. Two red-ware

pots were found beside the middle coffin : one to the north of it, the other to the south (Pl. IV). When the decayed coffins were removed, two others were discovered underneath them (Pl. V, *a*). A coffin was also found.

Tomb No. 5 lay W. of the previous tomb, with a recess about 95 cm. long, walled up with bricks, each measuring about 32 × 16 × 9 cm. It contained a decayed anthropoid wooden coffin measuring 125 × 77 cm., with the bones of a mummy inside it. The wooden face of the coffin was painted yellow, the eyes blue (Pl. V, *b*).

Tomb No. 6 had a recess closed by bricks. Two small red-ware pots stood W. of the brick recess wall (Pl. VI). A small decayed wooden coffin measuring about 88 cm. in length, contained the skeleton of a child. A little to the north were the remains of painted and inscribed wooden coffins and human skeletons with small beads scattered over them. It was then discovered that the tomb contained more than one superposed burial, as well as an anthropoid pottery coffin (Pl. VII) containing a mummy 168 cm. in length and 27 cm. in width (at chest), with the arms crossed on the chest, and the head turned to the west. With this mummy were found small beads. To the south of it there was another blonde-haired mummy with hands over the pudenda ; it had an uninscribed scarab (Pl. VIII *a*). A little to the east there was a third mummy which had also a scarab measuring 1.2 X 8 cm., inscribed with an obelisk flanked by two baboons. (Pl. VIII, *b*).

Tomb No. 7 lay to the south of tomb No. 6, measuring about 2×2.30 m. ; its recess contained the remains of wooden coffins with traces of blue and green paint and a few hieroglyphic signs. A human skeleton was found there, with the head turned westwards. An amulet of ivory representing the god Bes was the only object found with it (Pl. IX, *B*).

Near the surface of Tomb No. 8 were found some modern animal remains. The tomb-recess had its wall built of mud-brick ; each brick measuring about 32 × 16 × 9 cm. The tomb itself measured about 3×2.5×0.95 m. ; it contained decayed mummies and, at its W., two red-ware pots (Pl. X,).

Tomb No. 9 had a small burial-chamber measuring 2.5×2.25 m., wherein mummies had been buried one above the other, some on the E. side of the tomb, others on the W. They were wrapped in linen bandages smeared with a black material. One mummy was in a leather shroud, lying on its back, with its arms at the sides and the two hands fastened to the thighs by a rope (Pl. XI). The mummies measured in average 165×42 cm. A small quantity wooden of beads was found about them. The fragmentary coffins were almost reduced to dust.

Tomb No. 10 lay to the N. of tomb No. 9, with its recess shut by a brick wall. In it was a decayed wooden coffin, containing a mummy with the arms crossed on the chest. Small beads remained on the chest, and a scarab measuring 1.2×0.8 lcm. was found with it (Pl. XII).

As to Tomb No. 11 it was almost oval-shaped, lying S. of tomb No. 7 and measuring about 2.5 ×1. 95×1.10 m. The recess was found closed by a mud-brick wall. The two mummies in it had their hands over the pudenda, and their heads turned to the west. They measured about 140 cm. in length. One of them had a small scarab (Pl. XIII, *a*). Nearby there was a mummy in a wooden coffin. With it was found an amulet of faïence of double-headed Horus (Pl. XIII, *b*).

After the foregoing excavations work was undertaken to the east, sondages revealed three tombs of those hitherto known in that vast necropolis of Aṣfûn They contained mummies and quantities of beads.

North of the area excavated in 1960 sondages disclosed tombs with anthropoid pottery coffins measuring about 177×55×5 (in thickness) cm. In them lay mummies badly affected by damp, wrapped in linen shrouds, with their arms crossed on the chest and the heads turned to the west. In certain cases red-ware pots were placed at the heads and feet of the mummies (Pls. XIV, XV, XVI) (For other types of pottery, see (pls. XVIII, XIX). A red-ware offering-table was also found in one of the tombs of the N. cemetery (Pl. XVII).

CONCLUSIONS

1. The excavated tomb was often irregularly oval-shaped, consisting of an entrance to a recess closed by a brick or mud-brick wall. Mummies, individually or in a group, lay on their backs, with their heads turned to the west and arms crossed on the chest. The hands of some mummies concealed the pudenda, which shows that they were females. Sometimes a tomb contained several superimposed mummies wrapped in shrouds soaked in a black preparation of unknown composition.

2. One mummy was in leather wrappings, with both hands placed on the thighs and tied together with a rope (across the legs).

3. The anthropoid wooden coffins were plastered and painted, but they had been disastrously affected by moisture.

4. Some anthropoid coffins were made of pottery, containing mummies lying on their backs, with their arms crossed on their chests.

5. With most of the mummies were found quantities of bluish beads, which means that their chests had been originally covered with bead-nets. A few inscribed scarabs were among the finds.

6. A good variety of red-ware pottery was found with some burials.

H. S. K. Bakry

Other Types of Pottery Found in the Tombs (Pls. XVIII, XIX);

a) A red-ware pot, tapering towards the mouth, with two small handles on the sloping shoulders and a round base. Diam. of rim 5.4 cm.; height 24 cm.

b) A red-ware pot, tapering towards the base, with two fairly small handles. Diam. of rim 4.5 cm.; height 21 cm.

c) A red-ware pot, with two handles (one broken off), and aflat base. Diam. of rim 5 cm.; height 20 cm.

d) A red-ware pot, with two handles and a flat base. Diam. of rim 4 cm.

e) A red-ware pot, with two handles (one missing), and aflat base. Diam. of rim 4.5 cm.; height 15 cm.

f) A red-ware jug, with one handle and a flat base. Diam. of rim 4.2 cm.; height 13.4 cm.

g) A red-ware bowl with the inside surface burnt black. Diam. of rim 13 cm.; height 7.5 cm.

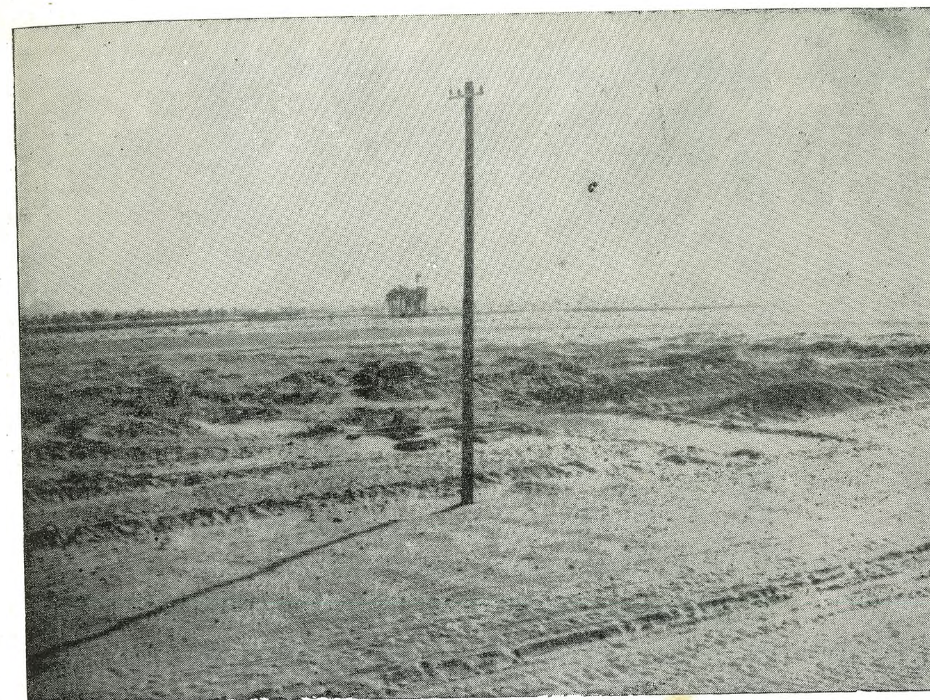
h) A red-ware bowl. Diam. of rim 24 cm.; height 9.5 cm.



(*a*) The previously excavated areas – S. and E. cemeteries - with the Zenêḳeh Village at the background, and the main road.



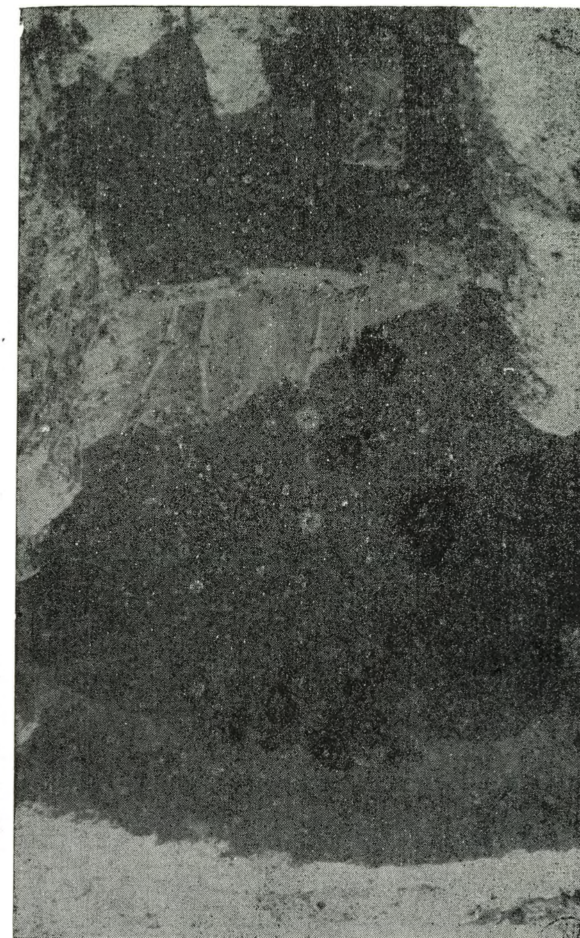
(*b*) The N. cemetery excavated in 1964, with the present excavations to the west.



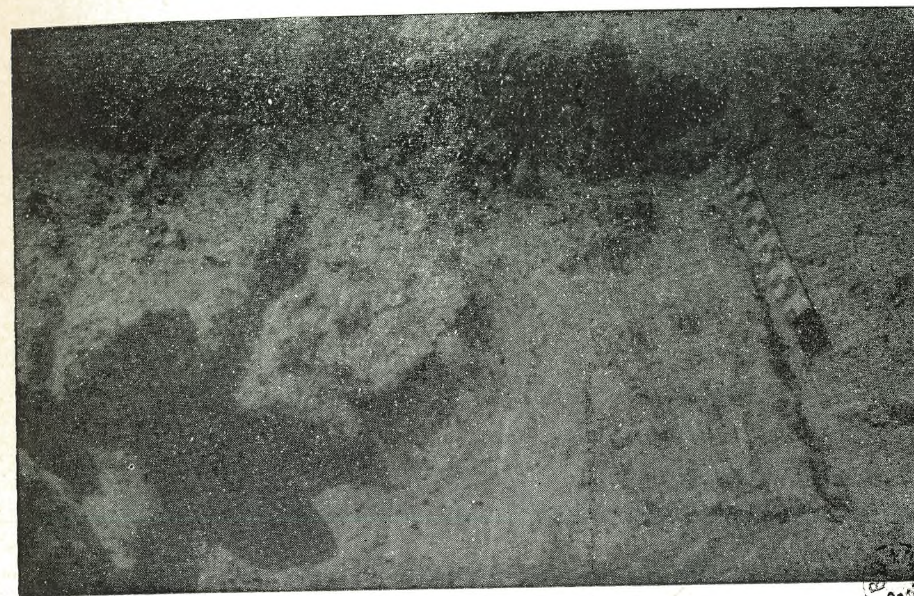
(a).—An excavated site beside the main road to Village No. 4. In the background is the grave of Sheikh Moḥammad el-Amîr, in the little palm-grove.



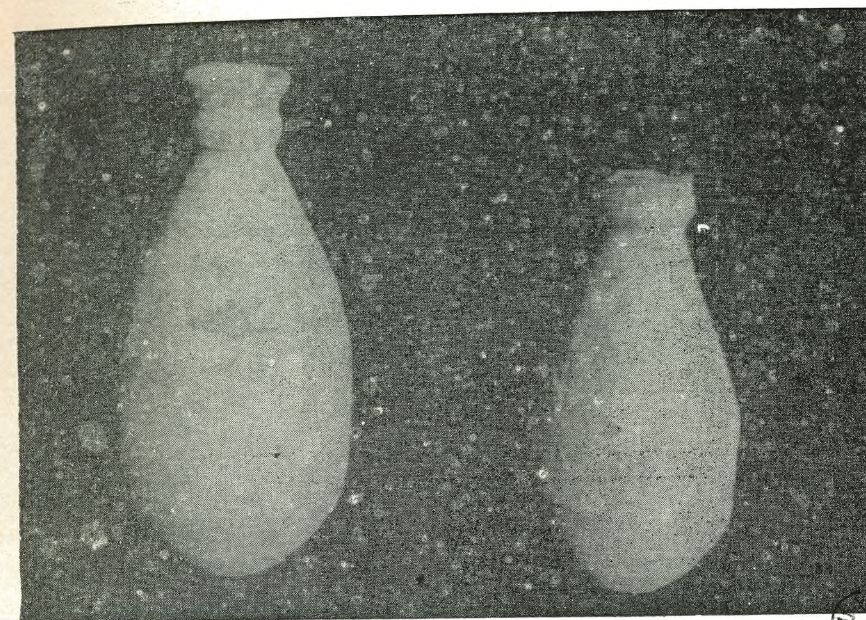
(b).—Another excavated area, with Zenêḳeh Village in the background.



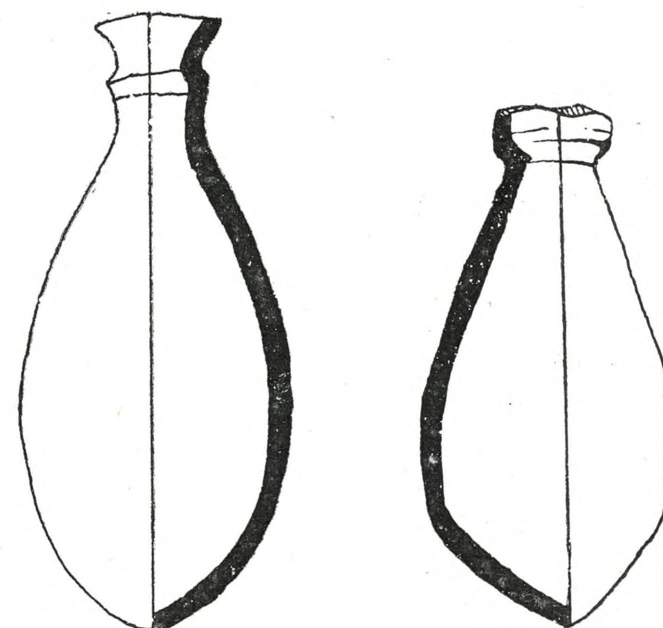
(*a*).—One of the tombs containing mummies with the recess brick-wall (at the foreground). (Tomb No. 1).



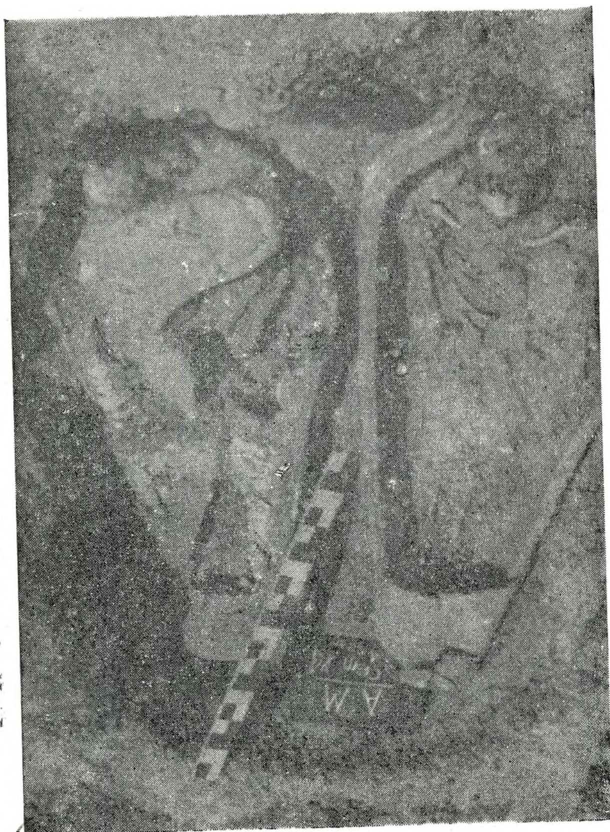
(*b*).– Decayed coffins with decayed mummies, with two red-ware pots near the middle coffin (Tomb No. 4).



(*a*) Two red-ware pots found in tomb No. 4.



(*b*)

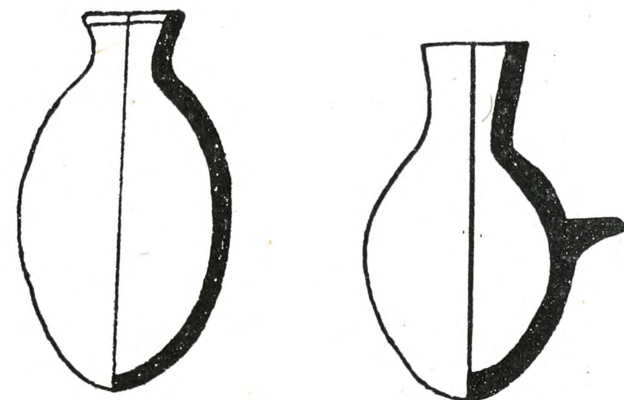


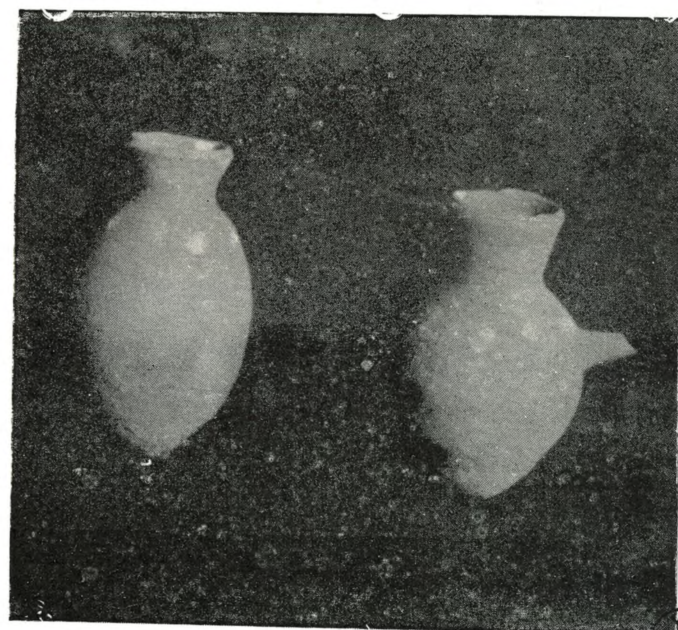
—Two pottery coffins containing mummies.
(Tomb No. 4.)



(*b*).—A wooden face (painted yellow) from a wooden coffin found in tomb No. 5.

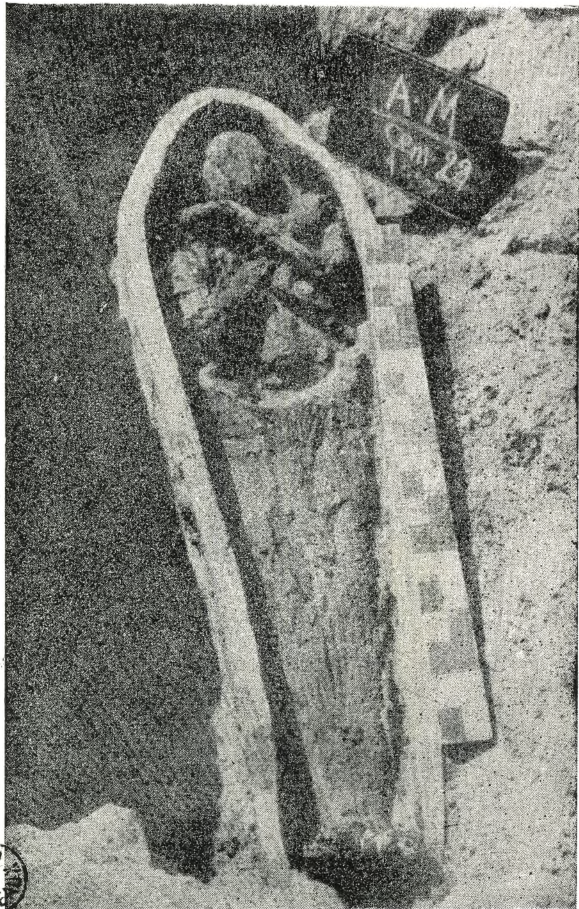
Pl. V (*a*, *b*)







Two red-ware oval-shaped pots : the right one has a spout, both found in tomb No. 6.



(*a*).—A mummy in a pottery coffin, with the arms crossed on the chest. (Tomb No. 6).



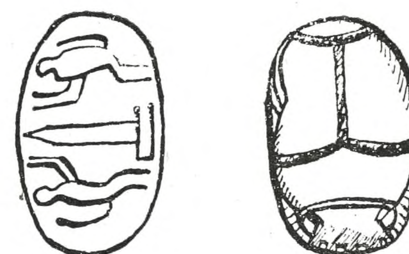
(*b*).—An anthropoid pottery coffin from one of the tombs of the N. cemetery.

Pl. VII





(*a*) A Fîaence scarab found in tomb No. 6.



(*b*) A faĭence scarab.



(*a*)

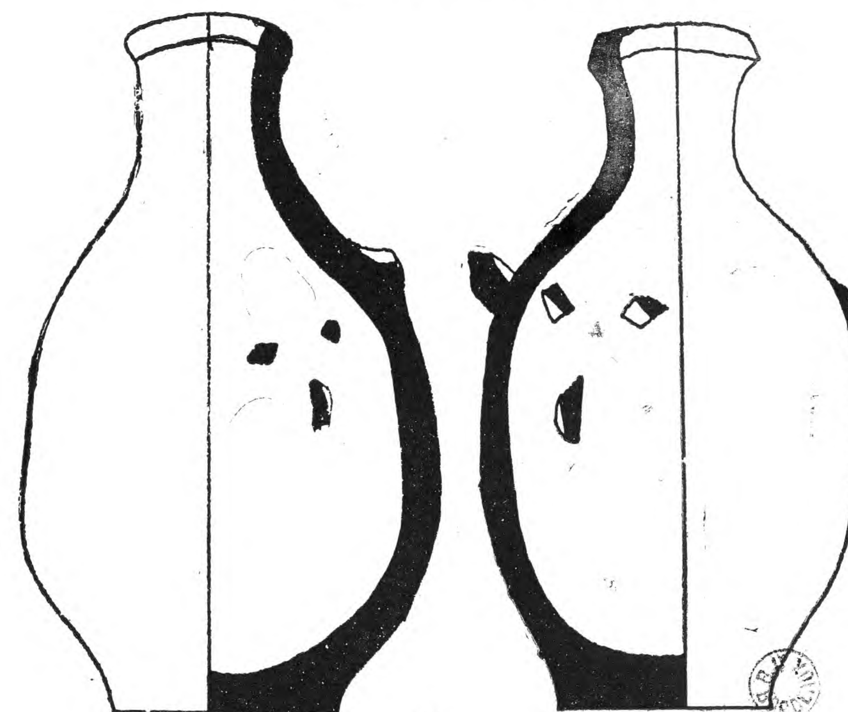




(*b*).—An amulet in the shape of the god Bes.



(*a*) Two red-ware pots (with broken-off handles) with three little knobs each, as details of a human face.



(*b*)



(*a*).—Two pottery coffins ; one with a mummy whose arms are tied with a rope, the other was found empty. (Tomb No. 9).



(*b*).—Three mummies found in tomb No. 9, the arms of the left one are tied with a rope.

Pl XII

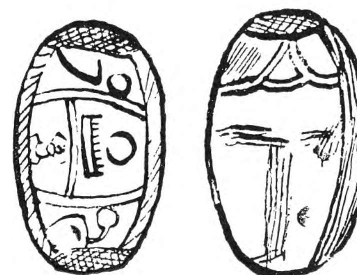


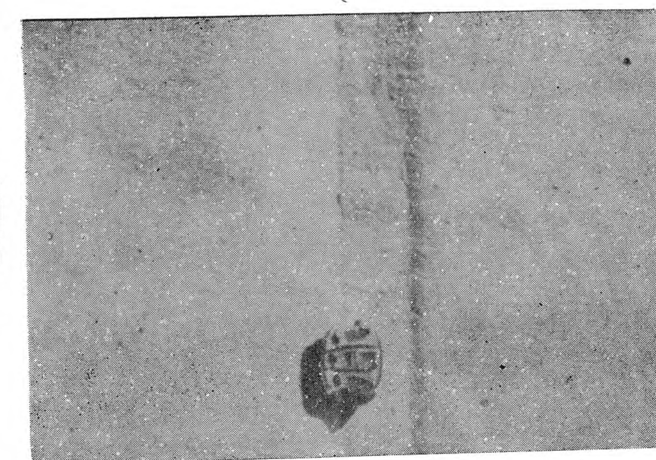
(*a*)





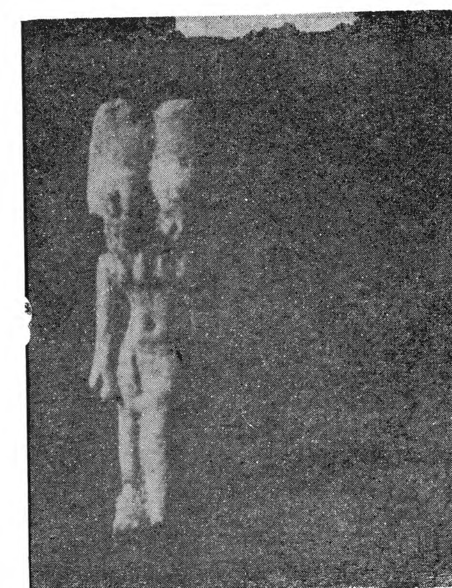
(*b*).—A faïence scarab.



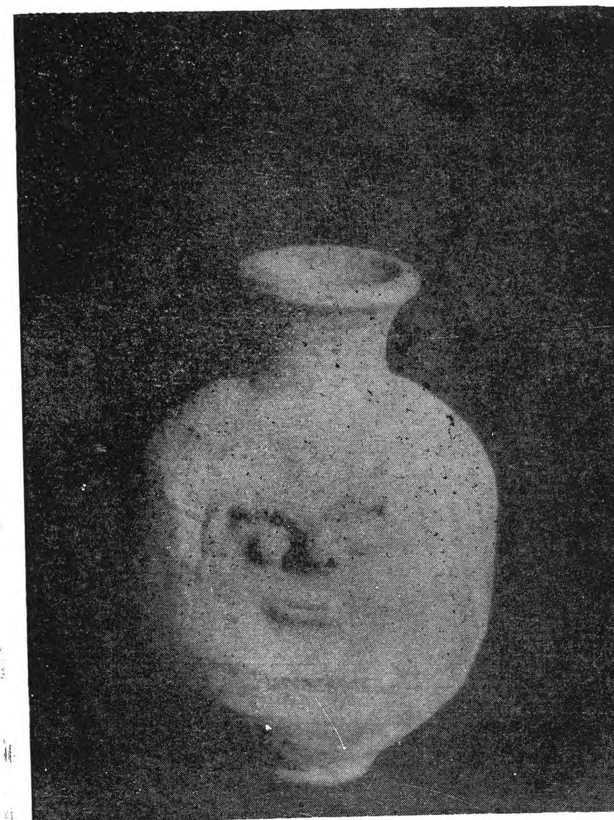


(*a*).—A small scarab.

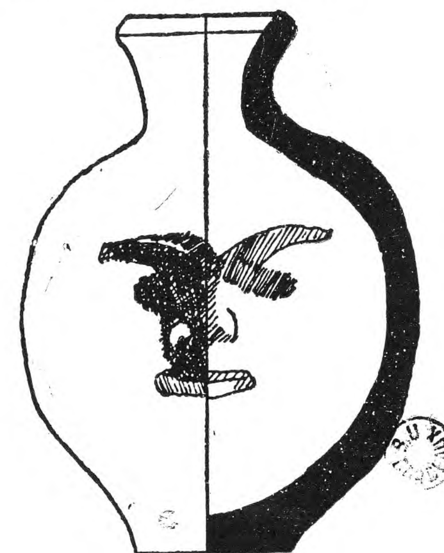




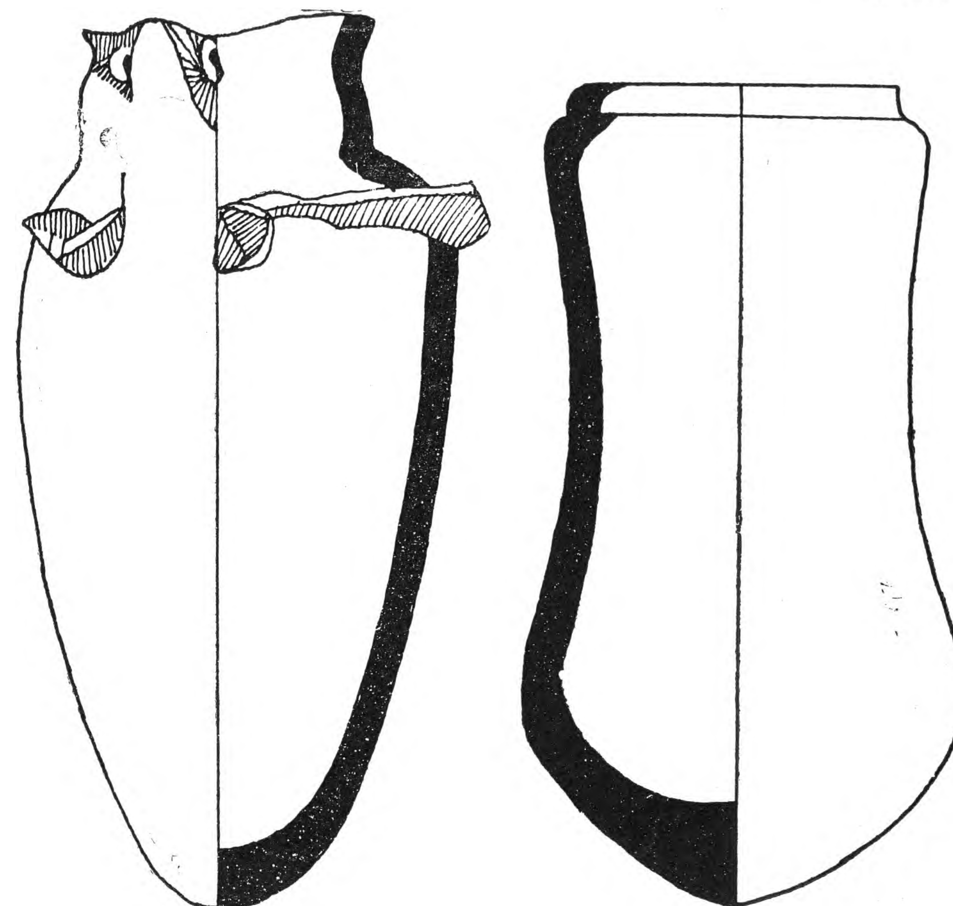
(*b*).—An amulet of faïence representing a double-headed hawk. (Tomb No. 10).

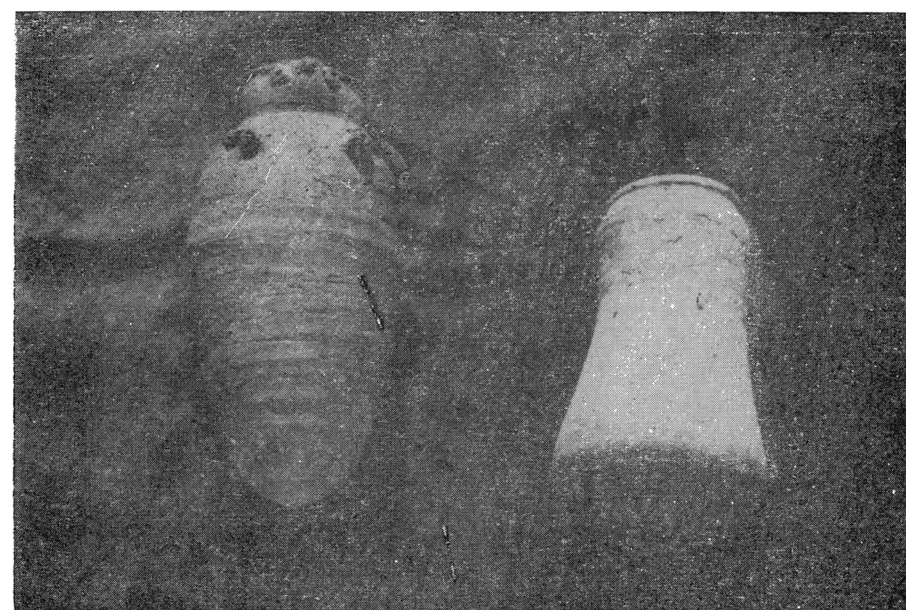


(*a*).—A pot with the details of a human face, found in the N. cemetery

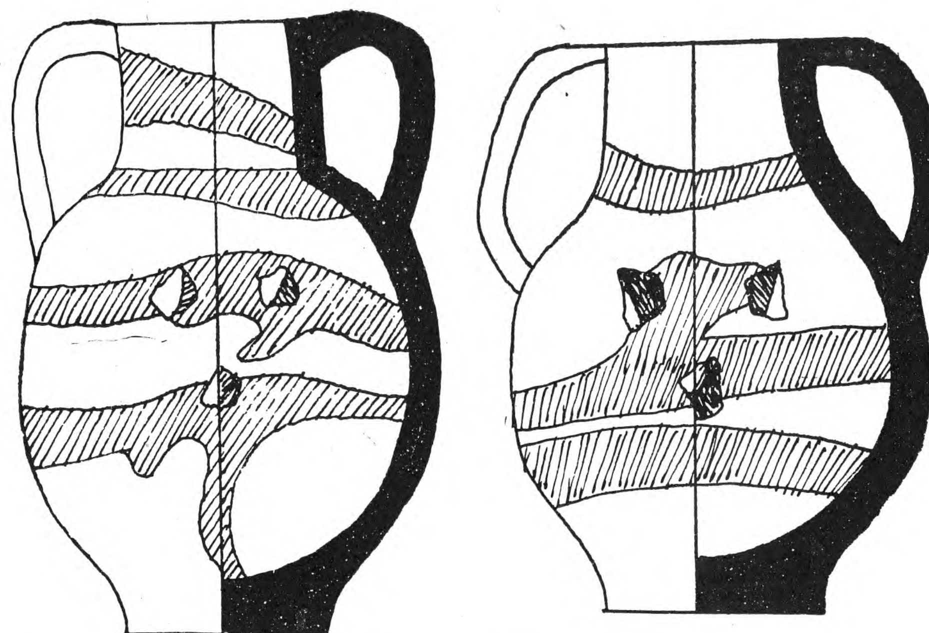


(*b*)





Two red-ware pots ; the upper part of the left one represents the head of a female hawk putting its two hands on its breasts, found in the N. cemetery.

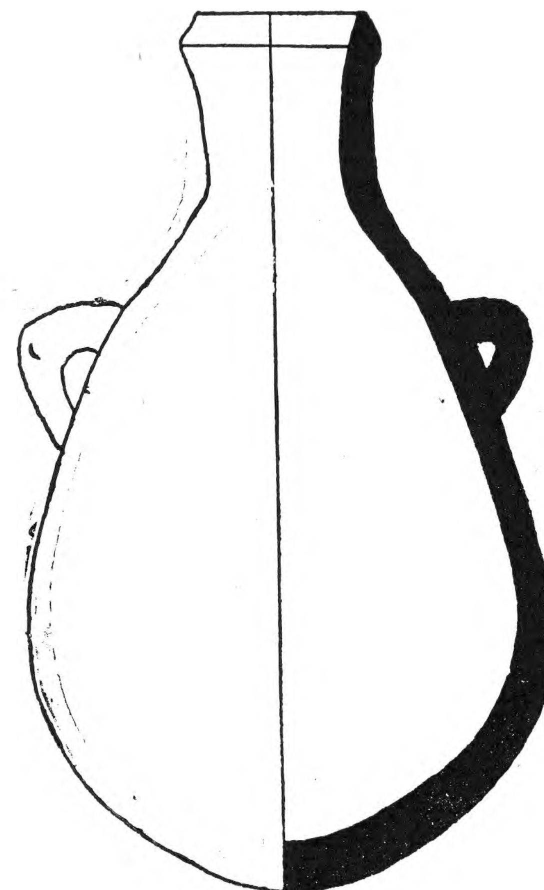




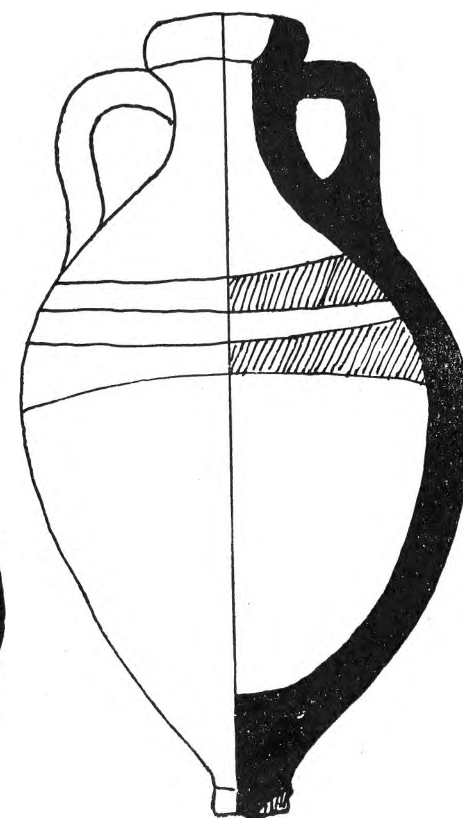
Two red-ware pots with three knobs each, three painted rings and large handles and a bigger pot with small handles on the shoulder, all found in the N. cemetery.



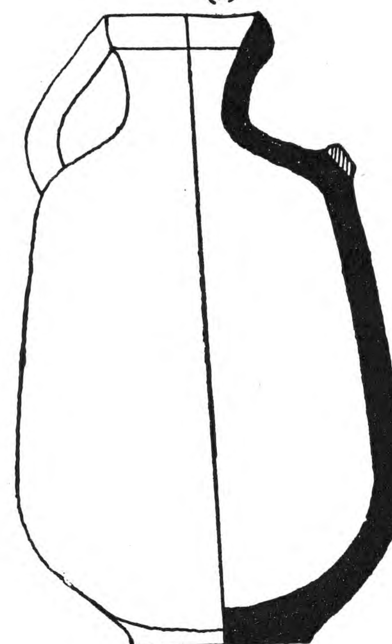
A pottery offiering-table.



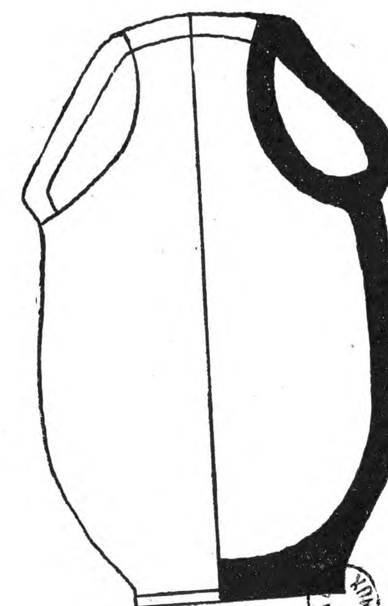
(a)



(b)

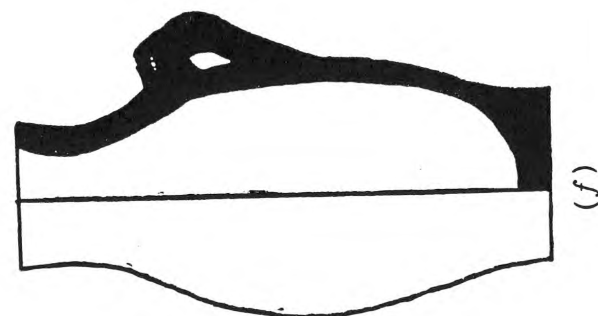


(c)

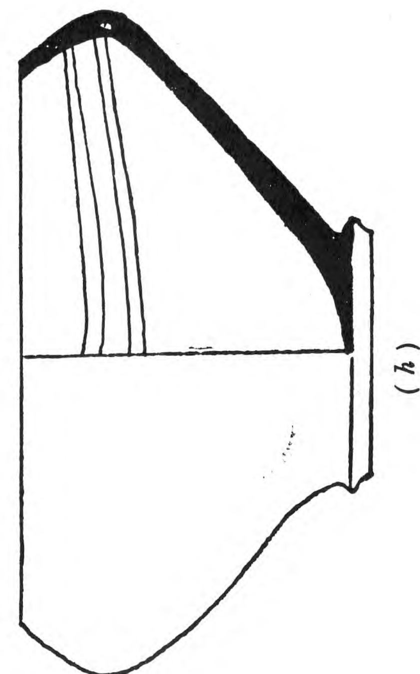


(d)

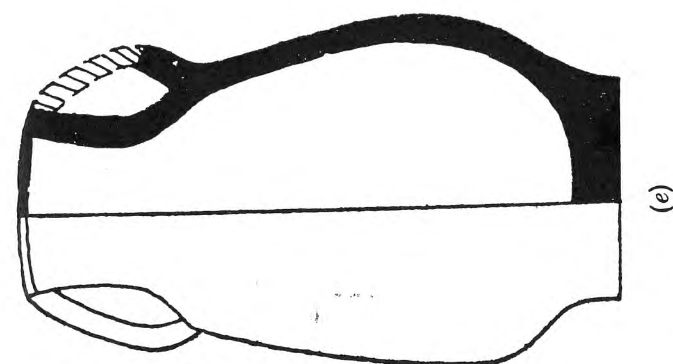
Pl. XIX



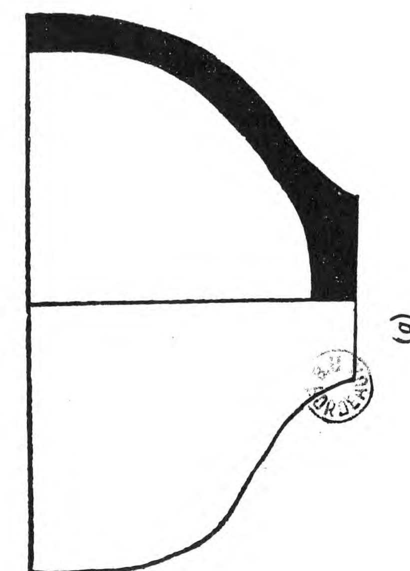
(f)



(h)



(e)



(g)

ANCIENT EGYPTIAN OBJECTS FROM BARMASHA, MINYA GOVERNORATE

By

HASSAN S.K. BAKRY

On Nov. 22, 1967 the General Inspectorate of Antiquities for Middle Egypt, Minya, was informed by the police-office of the town of el-ʿEdweh that some villagers of Zâwiet Barmasha had been arrested for illegally possessing a large number of antiquities. The villagers confessed that they had dug some land reclaimed by "the General Egyptian Organisation for the Exploitation and Development of the Reclaimed Lands" near ʿAṭf Ḥayder of the ʿEdweh district (see map).

The villagers had dug two pits about half a kilometre to the N. of the Zâwiet in pieces Nos 4 and 5 between the two new villages of Djihâd and Iḳdâm (Pl. I a). The first pit measures about 2 m. long, 1.5 m. wide and 1.5 m. deep (Pl. I b). In it there were an uninscribed fragment of the lid of an anthropoid sarcophagus, measuring 120 cm. long, 59 cm. wide (at shoulders) and 44 cm. wide (at feet) (Pl. II a), some uninscribed fragments of the lid of another sarcophagus, measuring 107 cm. long, 46 cm. wide (at base) and 55 cm. wide (at feet), an uninscribed fragment of the lid of a third sarcophagus, measuring 72 cm. long and 36 cm. wide, the remains of skulls and fragments of a wooden coffin originally painted and inscribed, lying about ten metres eastwards from the first pit.

The second pit is much shallower (Pl. II b). It shows that the villagers could not, for lack of time, dig it deeper.

In the reclaimed land there was a vast, ancient necropolis to the N. of Zwiet Barmasha, and there is a great possibility of finding many tombs. Measures were, therefore, immediately taken by the Governorate of Minya to guard this plundered and menaced archaeological site, that it might be scientifically excavated by the Antiquities Department.

Forty-five ancient objects were found in the villagers' houses. They were confiscated by the local police and handed over to the General Inspectorate of Antiquities to be registered and kept by the Inspectorate of Mallawy.

On Nov. 23 twelve more objects were acquired by the police, and given back to the Antiquities authorities of Middle Egypt.

The above-mentioned objects, which have presumably come from various sites in the reclaimed area, are all of wood. They fall into four groups:

1. A group of statues of Osiris, with heights ranging between 175 cm. and 35 cm. (Pls. III, IV a,b,c).

2. A group of statuettes representing Isis suckling her child Horus (Pl. V a,b).

The statues of Osiris, besides varying in size, were once magnificently gilded, but very scanty gilt patches have been left by the robbers, who scraped the surface of each statue in order to procure as much gold as possible. Technically a statue of that kind was fashioned out of cedar wood in several pieces. In the case of a statue of Osiris, the crowned head, the feathers flanking the crown, the *uraeus*-serpent and the beard, the arms and the plinth (now lost) were made separately and then fitted together by means of wooden nails and dovetails. The head of a large statue may consist of two or more pieces fitted together. The eyes are inlaid with rock crystal and obsidion, in frames of bronze, the eyebrows are also of bronze. Then a sheet of fine linen was stuck all over the statue to be covered with a thin layer of stucco. This was finally gilded.

Osiris is represented swathed as a mummy, wearing the *atef*-crown, and a *wsḫ*-collar and holding a crook and a flail. His crook, flail, *uræus*-serpent and beard are all of bronze.

As to a statue of Isis, the crown (consisting of *uraei*-serpents, two horns and a moon-disk) and the arms were separate pieces fitted into the head and the body. The goddess is represented seated on a seat placed on a plinth, either putting her hands on her knees or suckling her child Horus.

The same technique of gilding, applied to the statues of Osiris, was followed here with the figures of Isis. Moreover, one of the goddess's statues shows her wearing a wig hanging down over the shoulders and inlaid with strips of dark blue glass. The eyes are also beautifully inlaid.

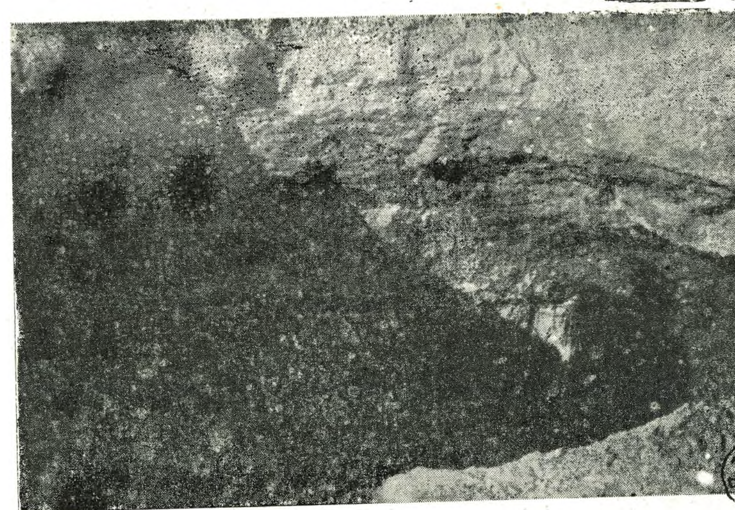
3. A group of small fish-shaped coffins, containing mummified fish. There are mainly two kinds of fish coffin, regardless of size. One type of coffin consists of two parts fixed together over the mummified oxyrrinchus-fish by means of wooden nails at the muzzle and tail (Pl. VI a). Another type consists of a hollowed fish-shaped piece of wood containing the mummified fish. In this case an opening was made along the lower edge of the coffin to allow the insertion of the mummified fish into the coffin (Pls. VI, VII b,c). The latter may, or may not, show dorsal and abdominal fins. The surface was coated with stucco before it was painted. The eye of the fish is inlaid in a surprising life-like manner. On its head there is a hole to receive a befeathered crown.

4. Inscribed and once beautifully painted fragments of coffins. Unfortunately inscriptions and painting have almost completely disappeared.

Hassan S. K. Bakry.



(*a*) One of the pits dug near the new villages.



(*b*) The first pit.



(*a*) The first pit with broken sarcophagi.



(*b*) The second pit which was not completely dug.



(*a*) Two larger wooden statues of Osiris, with the eyes inlaid; the deity entirely stripped of his regalia.

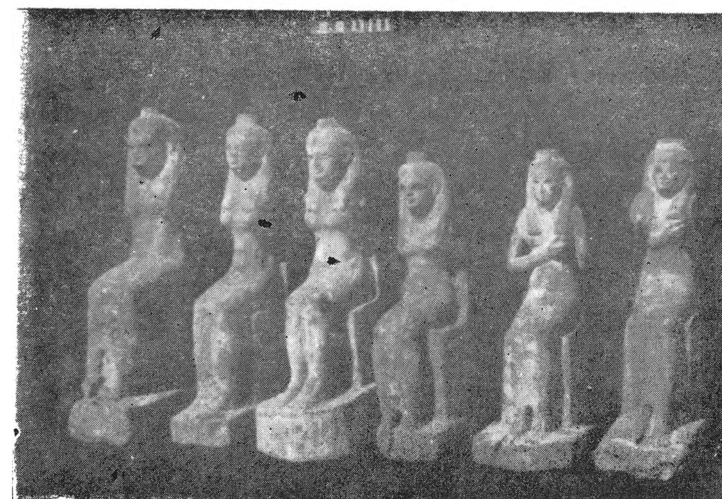


(*b*) Four of the wooden statues representing Osiris standing, wearing the *atef*-crown and a beard, and holding the *nḫḫ*- and *ḥḳꜣ*-sceptres.

Pl. III



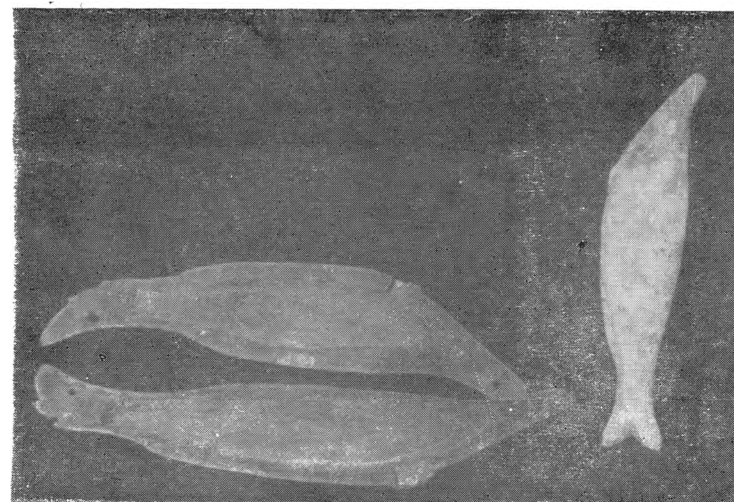
(*c*) The upper part of the two statues.



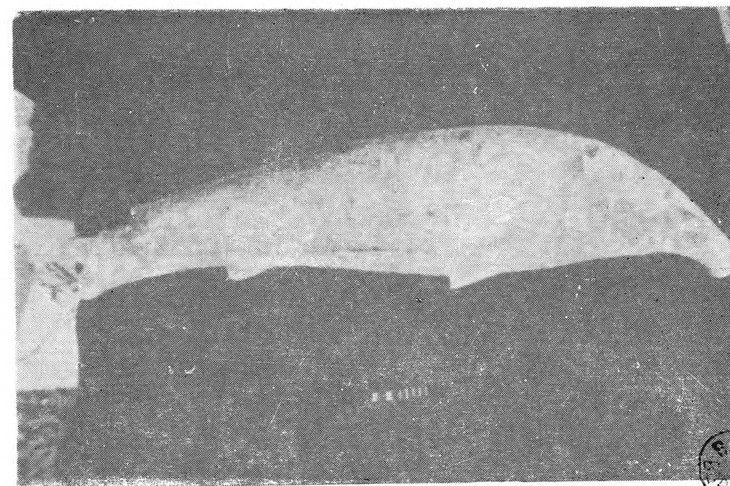
(*a*) Wooden statues of Isis, with Horus the child, the goddess's arms and crown missing.



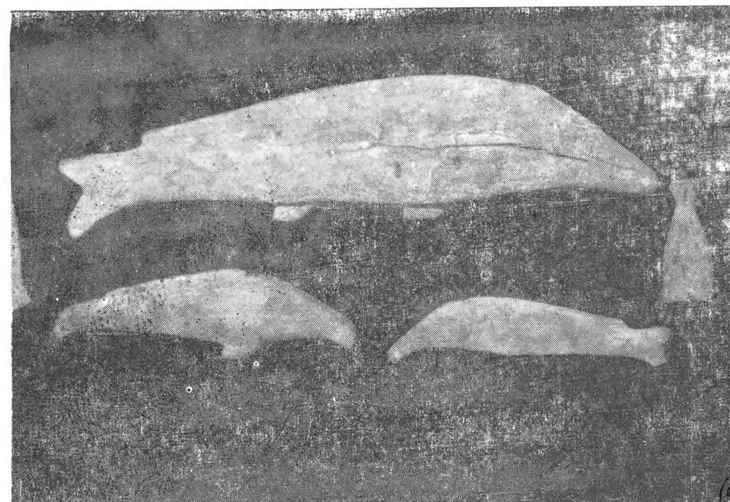
(*b*) Wooden statues of Isis suckling Horus (missing in two) and three of the goddess's wooden crown ; the biggest of them had had the wig inlaid with coloured glass.



(a) Wooden coffins for the sacred mummified fish, consisting of two parts to be closed by means of wooden nails.



(b) A large wooden coffin hollowed to contain a mummified fish.



(*c*) Three coffins and a crown of a missing one, all made of wood.

PREMIÈRE CAMPAGNE DE FOUILLES DE L'UNIVERSITÉ DE ROME A L'ASASIF (1970) - RAPPORT PRELIMINAIRE*

PAR

SERGIO DONADONI

Quittant temporairement Cheikh 'Abada - Antinoé, l'Université de Rome a porté cette dernière saison son chantier dans la région thébaine. En accord avec le Service des Antiquités nous avions choisi comme objet de l'exploration la Tombe n° 27 de la nécropole thébaine, dont le titulaire est le "Grand Majordôme de la Divine Ador atrice, Šešonq (1)".

Son ubication à la débouchée de la vallée de l'Asasif, juste là où celle-ci est coupée par la route goudronnée, la met particulièrement en évidence. En effet le monument est connu depuis bien longtemps : il a été dessiné par plusieurs voyageurs anciens, et soit Prisse d'Avennes, soit Wilkinson en ont publié l'extérieur. Le dessin de Prisse d'Avennes a été repris par Schäfer (2) qui choisit ce monument comme représentatif d'une certaine période et d'un certain goût. La Mission du Metropolitan Museum travaillant à l'Asasif s'est occupée du tombeau, et en a ramené quelques éléments sculptés qui sont déposés en partie au Caire, en partie à New York (3). Il s'agit de remplois, Aménophis III et Ramsès II y étant mentionnés. La fouille américaine n'a jamais été achevée et au moment où nous l'avons pris en consigne le monument présentait encore de nombreux points douteux, que nous n'avons encore résolu qu'en partie.

---

* La fouille a eu lieu du 20 Sept. au 11 Oct. 1970, La Mission était composé de S. Donadoni, S. Bosticco, A. Roccati (égyptologues) et I. Montalto (services techniques). Le *rayys* en a été notre Mohammed Hussein Hamid, de Quft. Le Service des Antiquités nous a donné comme inspecteur Mr. Mahmud Hamza, dont nous avions dejà apprécié la collaboration, et a bien voulu s'occuper de notre hébergement dans un de ses Resthouses. L'Inspecteur en chef Ahmed el Taher et l'Inspecteur de Qurna, un Abu-l-ʿayyun, ainsi que le chef des services techmiques, Mr. Salah Osman, se sont tous mis cordialement à notre disposition et nous leur devons beaucoup. La fouille a été effectuée dans le cadre d'un contrat de recherche du Consiglio Naziomale delle Ricerche.

(1) Cfr. Porter and Moss, Top. Bibl. I, 1 1960^2 p. 43.

(2) H. Schäfer and W. Andrae, Die Kunst des alten Orients, Berlin 1925^3 p. 123.

(3) Lansing and Hayes, MMA. Bull. Part II Jan. 1937.

Les quelques inscriptions pertinentes que la fouille américaine avait mis en évidence, donnent le titre du défunt : Ie *mr pr wr dwꜣt nṯr Ššnq*, dont l'identification a été l'objet d'un certain nombre de tentatives. Nous nous en tenons à ce qu'a dit L.A. Christophe dans un article paru ici-même et dont les résultats nous semblent confirmés par nos observations [1]. Il s'agit du fils du et de la dame qui fut en charge sous Nitokris et Ankhnesneferibre, et doit être placé entre Padihorresent et Padineit.

En quelques mots on peut dire qu'au début de la fouille on pouvait observer sur le terrain une enceinte en briques crues conservée à la hauteur de 3.50 mètres environ sur trois côtés, et presque complètement disparue sur le côté Ouest, le long de la route actuelle. Dans l'enceinte même il restait un mur de division, percé par un grand arc qui mettait en communication deux cours alignées sur un axe Est-Ouest. La cour occidentale était caractérisée par la présence d'une sorte de gouffre aux contours assez irréguliers et en grande partie rempli de décombres de toute espèce, à partir des gros blocs tombés des parois jusqu'à tout ce que les passants peuvent y avoir jeté. Au dehors de l'enceinte, non loin du coin Ouest de la paroi Nord se trouvait un complexe ayant fonction d'accès à la partie inférieure du tombeau : une descenderie coupée dans le rocher mettait en rapport une porte en bas et un massif en briques crues qui constituait une entrée monumentale. (Pl. I).

Ce que nous nous étions proposé pour cette première campagne consistait à déblayer la partie haute du monument et à étudier les problèmes qu'aurait posé une exploration de sa partie souterraine. Nous nous sommes donc attachés à deux points en particulier ; le nettoyage des deux cours, et un essai dans le gouffre de la deuxième cour et au bout de la descenderie.

La partie en vue du monument est constituée par un quadrilatère en briques crues, dont les dimensions sont de 24.50 m. sur 34.50 m. et dont la façade est à l'Est. Celle-ci

(1) L. A. Christophe, Les Trois derniers Grands Majordômes de la XXVI Dynastie, ap. ASAE, LIV (1956) p. 86 sqq, avec histoire de la question et dossier des monuments à attribuer à notre Šešonq.

est formée d'un gros bloc de maçonnerie presentant un fruit assez évident, et dont la base mesure 17.20 m. de front et 3.10 m. d'épaisseur. Au centre du massif une porte monumentale est maintenant obstruée au moyen de deux parois qui ont bloqué le passage et y ont amenagé une sorte de chambre à très haut plafond. Ce dispositif (qui n'apparaît pas dans le dessin de Prisse d'Avennes) a peut-être la fonction de consolider une structure compromise du fait que l'arc original s'était affaissé. Par conséquent le portail central n'est plus évident, et la vue générale en est faussée. Mais on peut donner ses mesures de base, soit 370 m. de largeur sur 320 m. d'épaisseur. L'aspect monumental de cette façade était peut être rehaussé par la présence de deux statues, qui n'est témoignée aujourd'hui que par deux bases en briques crues aux côtés de l'entrée à 2. m. env. de la façade. (Fig. 2).

La façade proprement dite s'insère dans le mur d'enceinte de telle sorte qu'une partie de celui-ci reste visible soit à sa droite soit à sa gauche, et qu'on puisse avoir clairement la perception qu'on est en présence de deux éléments différents dont chacun a son importance et sa signification. Le mur périmétral, en effet, est caractérisé par une décoration qui le couvre pour tout ce qui en reste, et qui consiste en une série de panneaux obtenus par un simple jeu de briques. Sur les cotés ces panneaux décorent toute la surface, en laissant libre une zone juste au centre, où l'on a l'image conventionnelle d'une porte (quatre panneaux de chaque côté de la partie centrale). Il est évident que cette décoration veut "den Rillen- und Nischenschmuck aus dem Anfange der Geschichte erneuern", comme le dit Schaefer [1].

La partie centrale, au contraire, reprend très fidèlement la façade des monuments religieux de l'époque – tels les petits temples à Karnak de la Divine Adoratrice Ankhnesneferibra.

En passant par la grande porte d'entrée on pénétrait dans une cour, large de 21.30 m. et profonde de 11.75 m., que nous avons vidée du remplissage qui s'y était accumulé, et qui cachait tout un système de murs. Ceux-ci définissaient un ensemble de chambres qui s'appuyaient à l'enceinte : deux pièces au Nord, deux au Sud, et deux de chaque côte de la

(1) Schäfer u. Andrae l.c., à propos de notre monument.

porte du mur de fond. Ces chambres présentent quelques différences dans leurs dimensions et leur structure. Celles du Nord mesurent 3.70 m. sur 3.30 m. et 3.50 m. sur 4.20 m. ; celles du Sud 3.80 m. sur. 4 m. et 3.70 m. sur 4.60 m. les deux au Sud de la porte de fond mesurent respectivement celle du coin 4.80 m. sur 3.10 m. et celle vers le centre 3.70 m. sur 2.90 m., tandis que celles au Nord mesurent 4.80 m. sur 3.30 m. (chambre du coin) et 3.70 m. sur 2.70 m. (chambre au centre). Les différences que l'on peut remarquer n'empêchent que le travail de fondation et de surélévation ne soit soigné, et il est facile de constater qu'il a été conçu d'emblée, pour une utilisation rationnelle de la cour au moment où l'on y a installé un centre d'habitation. Des restes de fourneaux dans les coins Nord Ouest (où l'on a trouvé un pot en place) et Sud Ouest semblent un témoignage de cet emploi. Le caractère secondaire de ces murs est prouvé par le fait que les fondations reposent toutes sur une couche de remblais haute de 30 cm. à peu près sur ce qui était le sol ancien de la cour. Celui-ci a été identifié en tenant compte des traces d'enduits sur les murs périmétraux, traces qui à leur tour indiquent que ce sol était plus haut de 35 cm. par rapport au sol extérieur. Dans le remblai de la deuxième chambre au Sud on a trouvé deux *ostraka* démotiques qui semblent d'âge romain et qui peuvent faire fonction d'un grossier *terminus*. Dans le coin Nord Ouest de la cour, au dessous des murs dont nous avons parlé jusqu'ici, on a trouvé à un niveau plus bas les fondations de deux chambres s'appuyant su le mur Nord. Elles constituaient probablement la première tentative de placer une habitation à l'intérieur du monument. Il semble qu'il faut mettre en rapport avec cette présence la découverte, tout près de ces murs, d'une quantité de perles en fayence bleue, et d'une petite *pyxis* avec couvercle (refait) de la même matière ; une jarre encore en place dans un coin de la deuxième chambre semble d'un type connu pour la XXVIe Dynastie. (1)

Le fond de la cour doit donc être imaginé sans les chambres qui maintenant y trouvent place. On voit alors qu'il consiste d'un gros bloc central de maçonnerie, ravalé vers

(1) cfr p. ex. W.M. Fl. Petrie and others, Meydum and Memphis (III) London 1910 pl. XLI n. 53 (et p. 66 pour la datation "probably of the XXVI Dyn").

le sommet, et qui lui aussi constitue une façade analogue à la première. Un grand arc le perce, à travers lequel on peut aujourd'hui admirer le temple d'Hatšepsut. Sa largeur est de 2.30 m., sa hauteur de 4.50 m. env. A' une observation un peu plus attentive on peut voir que l'arc, qui semble l'élément le plus caractéristique de l'ensemble, était soigneusement caché dans l'antiquité : (1) on peut très bien voir par la lumière frisante le contour de l'architrave à gorge que l'on avait appliqué en haut pour masquer cet arc qui n'était qu'un expédient technique déterminé par l'emploi des briques crues, mais qui aurait gêné un oeil égyptien. Il ne s'agissait là que d'un élément rapporté, qui est tombé et qui a disparu. En bas on a encore des fragments du seuil en calcaire qui donnait accès à un pavement de 25 cm. plus haut que la première cour.

Ce qui est à remarquer et qui est assez inattendu, c'est que le portail donnait accès non pas à la deuxième cour, mais à une pièce assez modeste, de 1.70 m. de fond (au delà du seuil) sur une largeur égale à celle de l'ouverture elle même. Sur le terrain on a encore parfaitement évidentes les bases des trois murs qui formaient la pièce, et si l'on observe les traces de l'enduit de plâtre blanc qui couvrait soit les parois soit le pavement on peut bien avoir la perception de l'espace enclos. D'une façon analogue on peut bien suivre du coté Ouest du portail ce qui reste des attaches des murs sur le bloc central. On est donc ici en présence d'une sorte de niche carrée, qui épouse le profil et les mesures de la porte, et qui a évidemment une fonction assez importante dans l'économie de l'ensemble pour qu'on puisse lui donner cette place d'honneur (2). (Fig. 4).

Cette deuxième façade se relie à l'enceinte au moyen de deux pans de mur, qui n'arrivent pas à sa hauteur et dont on reconnait la fonction - pour ainsi dire - d'écran. Celui de la partie Nord ne présente pas d'ouverture, tandis qu'au centre de son correspondant au Sud il s'ouvrait une porte,

(1) Sans doute il en était de même pour le grand arc du tombeau de Montouemhat.

(2) C'est là dernière que nous avons trouvé deux riches depots de cônes funéraires de Šešonq, ces uns avec le nom de son père, un autres avec celui de sa mère.

dont le seuil et les jambages restent pris dans le blocage effectué au moment où l'on a construit les chambres de la première cour.

Cette porte, de 1.60 m. de largeur, était celle qui exerçait en réalité la fonction qu'on aurait à première vue attribuée au portail central, soit de mettre en rapport la première cour avec la deuxième. Celle-ci est un peu plus spacieuse que l'autre, ayant 21 m. de large sur 16.70 de fond. Le mur Ouest a disparu, sauf que pour quelques restes ; le coin Sud Ouest montre d'assez substantielles refections, et la porte dont on entrevoit des restes du seuil au bout Ouest du mur Nord semble être secondaire.

Ce qui caractérise cette deuxième cour est la profonde excavation qui défigure sa moitié Nord, et que nous avons commencé par fouiller en cette saison. Nous avons déjà dit qu'elle se présentait remplie de débris de toute sorte, et que son contour irrégulier dénonçait une série d'éboulements du rocher. Toutefois, en quelques points, on pouvait remarquer des restes de murs en briques qui semblaient limiter en haut cette zône. A un examen un peu plus attentif nous avons pu déceler des angles bien marqués au moins en deux points, et nous avons ainsi pu délimiter le carré qui inscrivait ce qui est reconnaissable comme une cour à un niveau inférieur.

Un déblaiement total n'était pas dans le plan de notre activité pour cette saison : nous nous sommes donc limités à pratiquer un sondage en entonnoir, qui a atteint le niveau du sol ancien à -6.50m. par rapport au niveau de base. Au cours de la fouille on a pu mieux observer quelques restes de hiéroglyphes dans le plafond d'une caverne du coté Est du ravin, et on a ainsi constaté qu'on avait là une inscription en colonne dont il ne restait que les derniers signes (les jambes d'un oiseau et) entre deux bandes polychromes (jaune-bleu ciel- blanc-rouge, - bleu ciel - blanc et viceversa). On peut croire qu'on avait là la toiture du porche de la cour, et qu'il ne restait que des éléments du nom de la mère de Šešonq. En appui de cette supposition, on a trouvé de nombreux fragments inscrits et quelques restes qui semblent être éléments de piliers à section carrée, ou tout au moins quadrangulaire. Des fragments de tôres et de gorges ont

aussi été récuperés. Nous serions donc en présence d'une cour hypèthre, ainsi qu'il en est, après le grand exemple de Montuemhat, pour Aba, pour Pabasa, pour Padineit.

La plus grande partie de cette cour est encore à vider, et il est trop tôt pour en parler, et pour dire d'un couloir souterrain qui semble en prendre origine vers le coin Sud Est.

Une fois qu'on a établi que l'ouverture mesurait 6 m. environ de large sur 8.40 m. on doit mettre en évidence qu'elle n'occupait nullement une position centrale dans la cour, mais qu'elle était franchement déplacée vers le Nord, de telle sorte que l'axe de l'ensemble ne faisait qu'effleurer son côté Sud.

Le corps de l'édifice est complété, sur le Nord, d'une descendérie (Fig. 6). Un bloc de maçonnerie de 12.30 m. sur 2.30 m. en encadrait la porte et donnait accès à un couloir - ou mieux, escalier en pente - renfermé entre deux murs de briques dans sa première partie, et s'enfonçant dans le sol par la suite, pour une longueur totale de 13.20 m. Pour ce qu'on peut en juger, les deux parois étaient couvertes de petits blocs rapportés, d'un calcaire de meilleure qualité que celui dans lequel était creusé le passage. Cela avait été reputé nécessaire pour permettre une bonne gravure des textes et des représentations qui devaient les couvrir. Une partie de ces blocs est restée en place, une partie est tombée par terre où nous l'avons retrouvée, une partie a disparu. Les textes contenaient des éléments du formulaire religieux et de l'autobiographie conventionnelle, et on arrivera à en remettre en ordre quelques passages. Au bout de l'escalier, on a un palier de 2 m. sur 1.10 m. et deux images de Šešonq sont gravées sur les parois en un relief assez délicat. Le visage est perdu dans les deux cas, mais dans l'image à l'Ouest (la mieux conservée) on peut observer la finesse de travail de la coiffure et on remarque l'amulette qui pend au cou et qui (comme ailleurs à cette époque) reprend un prototype du Moyen Empire (1), tandis que la coiffure est plutôt inspirée à dés modèles dé la XVIIIe Dynastie. (2) (Fig. 8)Le fond du palier

(1) Semblable déjà chez Montouemhat : J. Leclant, Montouemhat, Quatrième prophète d'Amon, Prince de la ville, Le Caire 1961 pl. LXI.

(2) Là aussi des précédents déjà chez Montouemhat.

est occupé par une porte, de 0.90 m. de large, dont la partie supérieure est tombée par suite d'un effondrement du rocher. (Fig. 7). Le blocage de la porte étant moderne, nous l'avons démonté pour nous rendre compte de la situation à l'intérieur. Nous avons ainsi pu observer que tandis que le jambage à droite est encore presque complètement en place, celui à gauche a été deja remonté en âge ancien. Par conséquent un texte suivi se lit à l'intérieur du premier, tandis que le deuxième n'offre que des fragments d'inscriptions intercalés par des blocs blancs (Fig. 7).

Le texte n'a pas été encore découvert jusqu'au bout, puisque vers le bas on est en présence d'un banc assez compacte de débris anciens (à travers lesquels un voleur ancien a pratiqué un mince trou) et que ce travail dépassait notre plan pour cette année. Ce que l'on a pu voir jusqu'ici sera intégré dans le futur : à droite on a un petit hymne solaire dans les deux premières lignes, et un texte concernant le défunt ensuite.

Un léger élargissement au delà du montant occupe l'épaisseur d'un mur, et un deuxième montant indique l'autre face de la porte à 1.70 m. vers l'intérieur. Toute cette partie est remplie des débris dont nous avons dit, et ne laisse subsister vide qu'une petite partie en haut. Le nettoyage nous a donné ici des céramiques (en grande partie fragmentaires) d'un type très différent des tessons recueillis dans les cours : il s'agit de vases souvent de petites dimensions, oblongs ou sphériques qui semblent dériver du mobilier ancien de la tombe, ainsi qu'il en est des nombreux fragments d'un vase en terre cuite sur un tesson duquel on a marqué à l'encre

 en hieratique. Un examen de cette partie ne sera entrepris que dans la campagne prochaine, et nous nous sommes contentés copier les premières lignes des deux inscriptions qui ornent à droite et à gauche le passage.

Au delà de la porte on ne pouvait pénétrer dans l'intérieur qu'à condition de se glisser dans une fente près du plafond. Un des membres de la Mission l'a fait, et il a pu constater que l'on est là dans une chambre qui met en communication le point d'arrivée de l'escalier descendant et la

cour inférieure de l'ensemble. On est donc encore en présence d'un élément qui est connu depuis Montuemhat, et qui a des parallèles dans les tombes d'Aba, de Padineit, de Pabasa pour rester dans le milieu de l'Asasif et de l'entourage des Divines Adoratrices. Le plafond de cette chambre de raccord s'est écroulé et le passage vers la cour s'est ainsi transformé en une dangereuse caverne : toutefois nous y avons recueilli quelques fragments de sculpture montrant que les parois en étaient décorées, et qu'il nous sera nécessaire dans le futur de procéder à une exploration méthodique et complète de la salle.

Ce que nous avons pu constater pour le moment est donc relatif à la structure de l'ensemble, sans que nous puissions pour le moment donner trop de détails. Mais c'est juste la structure ce qui pose les problèmes les plus intéressants en une comparaison mutuelle avec les autres tombes saites de l'Asasif.

L'organisme architectural de notre tombeau est assez clairement articulé. On a un élément constitué par la première cour, enfermée sur elle-même et desservant la niche derrière le portail du fond. La deuxième cour n'a pas un point de vue central, et l'eccentricité est marquée par le desaxement de la cour souterraine qui s'y trouvée inserée. Ce caractère asymmétrique s'oppose ainsi à ce qui est la formulation parfaitement axiale du premier *kôlon* de l'ensemble. A ce système en surface, s'ajoute comme troisième élément la partie hypogée, qui a son point de depart dans le petit pylône latéral au Nord et se poursuit par le couloir descendant, la chambre de raccord, la cour. C'est ce que nous avons encore très peu exploré dans les détails, mais il est évident qu'on est là en présence d'un ensemble autonome par comparaison avec les autres éléments, bien que tout cela soit réuni dans un contexte unitaire. Cette juxtaposition de parties clairement définies et n'étant pas conçues l'une comme aboutissement de l'autre est un fait assez typique pour qu'il mérite d'être souligné comme caractérisation structurale. Mais à côté de cet aspect, il faut considérer la fonction "allusive", ou mieux la "signification" des moyens qui ont été mis en oeuvre. Les éléments les plus singuliers et qui s'éloignent de la plus simple formulation architecturale

sont l'emploi des murs à redans et la cour creuse. Il s'agit là d'éléments qui sont, en commun avec d'autres tombeaux de la même série et qui constituent en quelque sorte leur raison d'être par compairson aux autres tombes environnantes. Le caractère culturel de la reprise des modèles de technique "thinite" dans l'enceinte est évident, et il est souligné par le fait qu'il est inséré dans un système plus moderne -celui des pylônes- de sorte à en faire ressauter l'anachronisme. Il s'agit, en quelque sorte, d'une "citation", d'une "allusion" et non pas d'une réévocation. Dans la tombe de Šešonq ainsi que dans les autres qui ont les mêmes caractéristiques à commencer par celle de Montouemhat, les éléments "thinites" de l'enceinte doivent rappeler un bâtiment auquel on emprunte ce qui est nécessaire et suffisant à le faire reconnaître. S'il était question d'une entière classe de monuments, en effet, on aurait dû refaire tout l'ensemble "thinite", sans en rompre l'équilibre et l'harmonie par l'intrusion d'un autre niveau de goût. Le deuxième élément, la cour inférieure, qui n'est pas lié à une syntaxe de la construction mais peut apparaître en des positions différentes montre par cela même sa fonction essentiellement semantique et non pas architecturale. Les tombes de Šešonq et de ses congénères rappellent donc un bâtiment qui doit avoir une spéciale valeur sous un angle funéraire, qui doit être caractérisé par une architecture de type "thinite" et qui soit en partie au moins à un niveau audessous du sol. Ce ne serait pas le soi-disant "Tombeau d'Osiris" à Abydos le prototype auquel on se refait ici ? ([12]) La question, très lourde de conséquences, est seulement posée ici. On pourra en étudier la vraie consistence seulement après une recherche plus approfondie, et seulement après la fin de la fouille.

SERGIO DONADONI

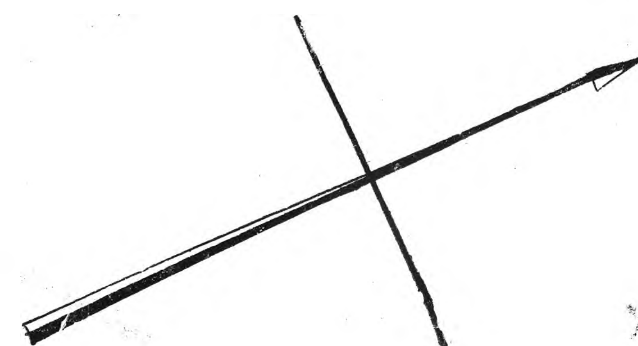
([11]) Sur la tombe de Ḏer, après Amélineau et Petrie et après l'impossible reconstitution de Reisner, The Development of the Eg. Tomb donw to the Accession of Cheops, Oxford 1936 p. 22 et p. 325, on doit voir, J. VANDIER, Manuel 1, 2 p. 623 ; et plus en détail H. RICKE, Bemerkungen, I, p. 38-Sgg. ; II p. 14.Sgg. et enfin J. Ph. LAUER, Evolution de la tombc égyptienne jusqu'à la Pyramide à degrés, ap. MDIK, XV (1957) p. 148 sqq.

Fig. 2.—La façade.

Missione Archeologicain Egitto de il'Università di Roma

TEBE OCCIDENTALE - TOMBA No. 27

(1970)





-6.50

-1.50

+0.24

+0.24

+0.24

+0.36

+0.00

resti delle strutture in elevazione.

camere sotterranee.

muri preesistenti.

muri d'epoche posteriori.

ricostruzione grafica.



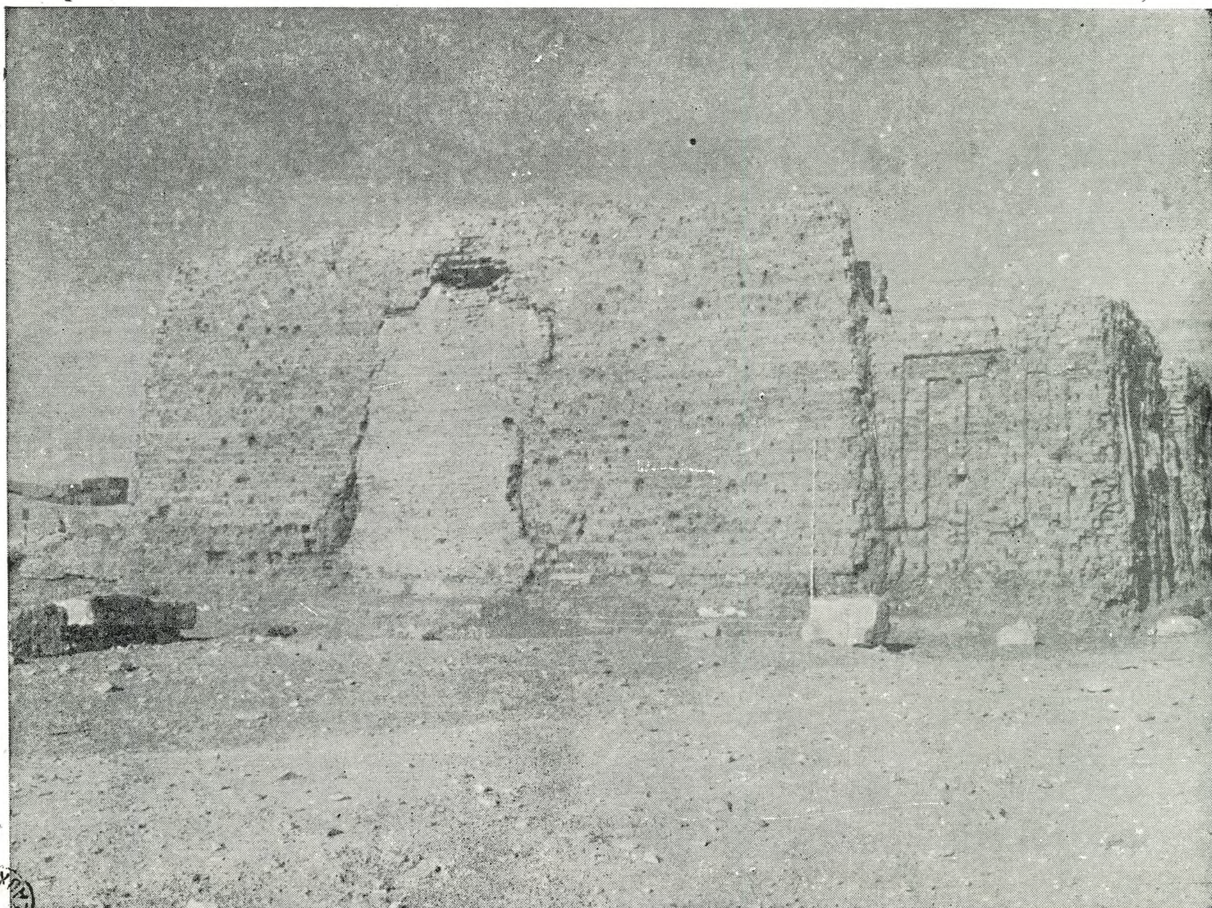


Fig. 2.—La façade.

Pl. II

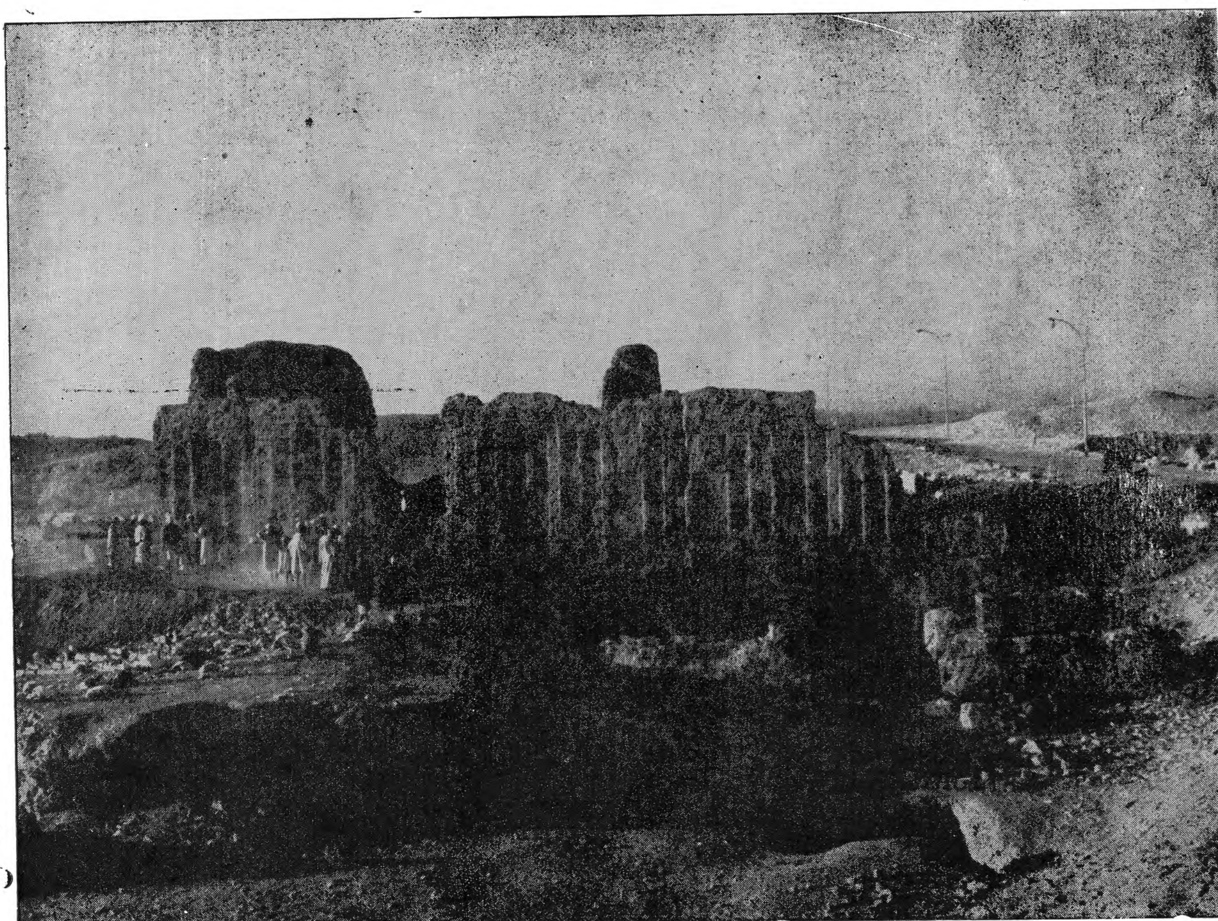


Fig. 3.—Le côté Nord, avec l'entrée aux parties souterraines.

Pl. III



Fig. 4.—Le portail entre les deux cours.

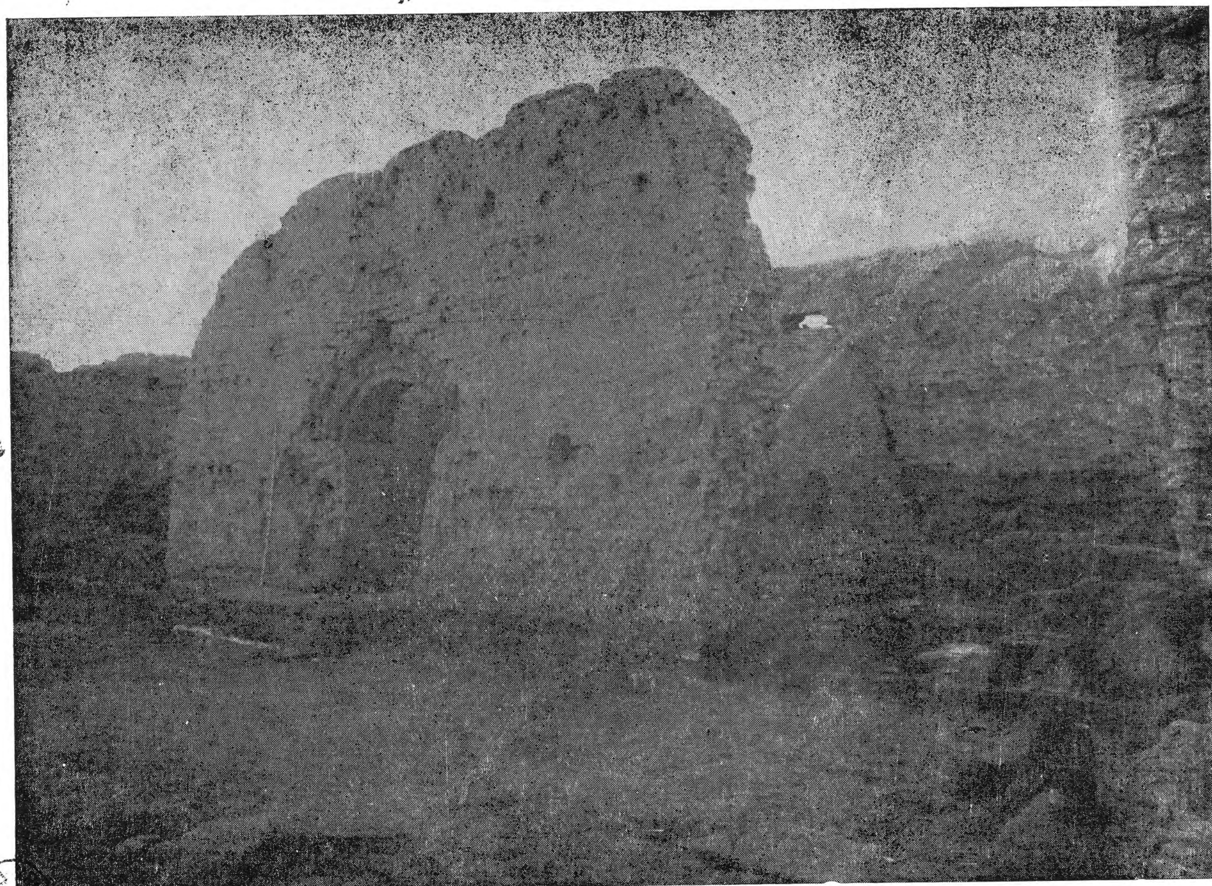


Fig. 5.—Le mur entre les deux cours, les arasements de la niche, le seuil de la porte de communication.

Pl. V

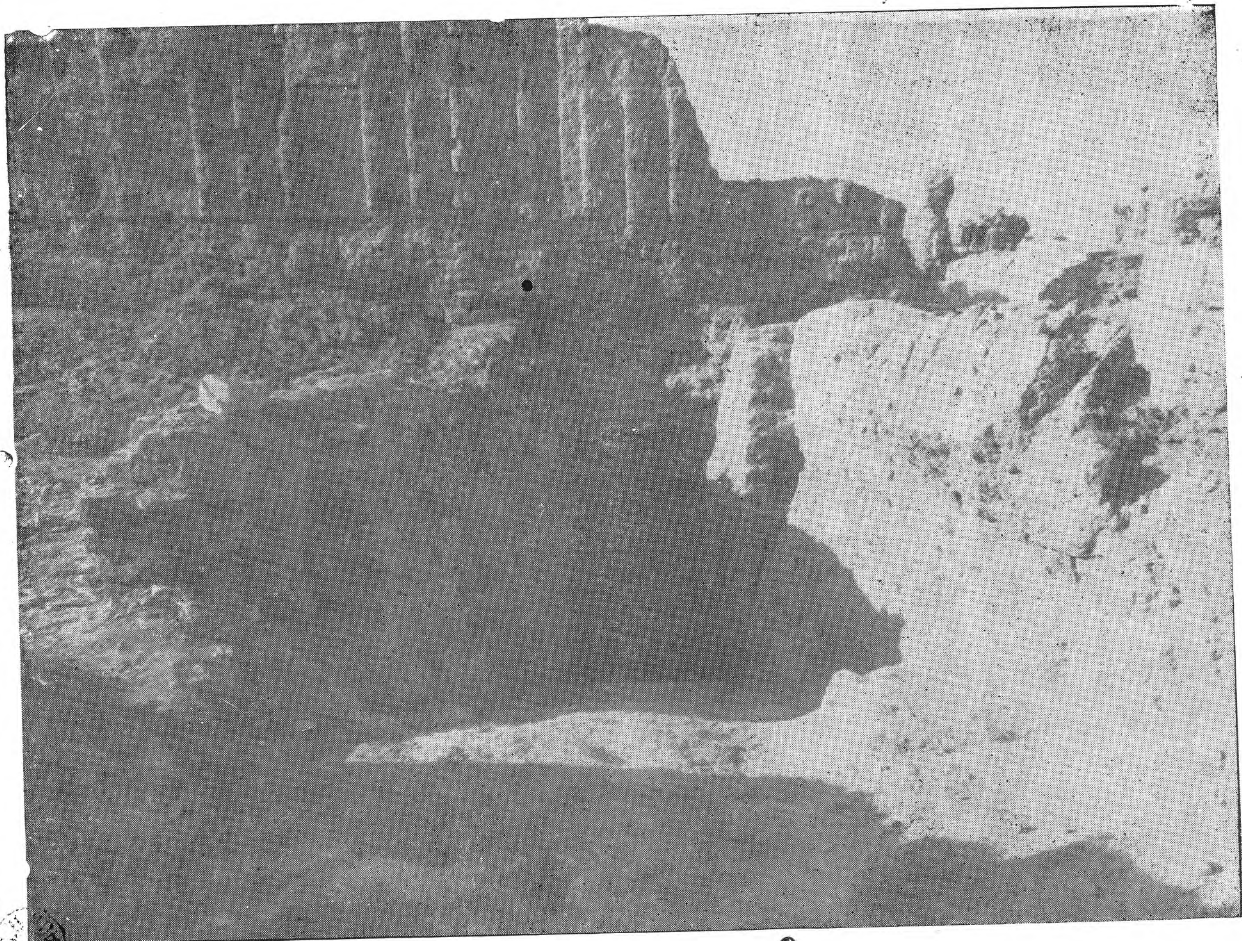


Fig. 6.— La descenderie

Pl. VI



Fig. 7.—La porte du souterrain après déblocage.

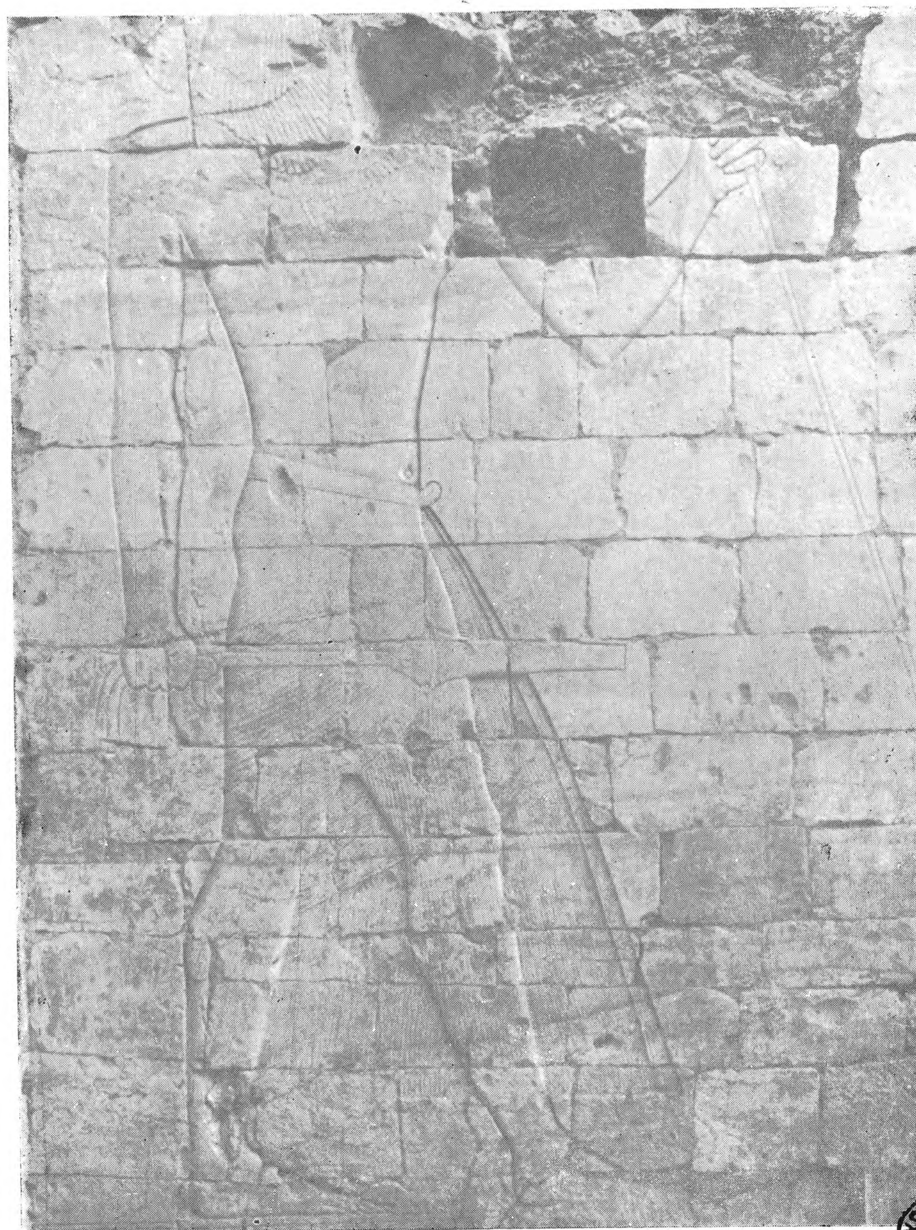


Fig. 8.—Un des deux reliefs de Šešonq au bout de la descenderie.

PRELIMINARY REPORT ON THE EXCAVATIONS OF THE ANTIQUITIES DEPARTMENT AT KÔM ABÛ BILLO

BY

SHAFIK FARID

The project of "El-Nasseri Canal" made it necessary to excavate the tract through which it will pass at the site called Kôm Abû Billo.

Kôm Abû Billo is the modern name of the necropolis of the ancient city of Therenuthis (modern El-Tarrana), located on the edge of the western desert between the railroad stations of El-Khatatba and Kafr Dawud at a distance of about seventy kilometres north-west of Cairo.

Work began on December 20*th* 1969 and continued until 31*st* March 1970. It extended approximately four kilometres from north to south and about 170 metres from east to west (1).

The staff of the expedition was composed of the following members under the supervision of Shafik Farid, the field Director :—

Assistant Archaeologists . .	Galal Shàrawy Mohamed Nasr Ahmed Abd El-Fatah
Draughtsmen	Hassan Osman Abd El-Latif Nawar
Architect	El-Sayed Abd El-Hamid
Photographers	Mohamed Rizk Ali Sukar
Restorer	Mohamed Yassin

The excavations were very interesting as they revealed unexpected results. A vast cemetery covering a long period from the Sixth Dynasty (2423-2280 B.C.) to the Roman period (4*th* century A.D.), was disclosed (2).

---

(1) Funds for the excavations had been supplied by the Ministry of Irrigation.

(2) In 1935 the University of Michigan has carried out excavations at the site under the supervison of Dr. Enoch E. Peterson, the Director of the Kelsey Museum. For the finds, see Porter & Moss, Bibliography, IV, pp. 67-8.

Old and Middle Kingdoms (Pl. 1).

The majority of the burials of these periods were found either in the mere sand or in plaster, reed or wood coffins. Other burials were made inside brick-built tombs. With the bodies, there were found pottery, alabaster, schist, porphyritic vases, together with toilet objects such as bronze mirrors and koḥl-sticks, alabaster and ivory spoons. Necklaces consisted of cylinders, beads of various forms and materials as gold, steatite, carnelian, bone and faience were also recovered.

Among the objects picked up from a grave of the Old Kingdom is an alabaster ointment vase 18 cm. high with exterior rim and tapering towards the bottom. On the body is incised the cartouche of King Pepi I (Mry-rᶜ) of the VI*th* Dynasty (Pl. I). The grave belongs to a female placed in a wooden coffin which had completely disintegrated. The body lay on the left side with head to the north, face to the east and kness slightly flexed. The elbows were bent and hands raised to mouth. Close to the head and the feet, there were many vases of alabaster, schist, porphyry, an oval grinder of quartzite, two bronze mirrors, two flint knives, three bronze koḥl-sticks, two spoons of ivory and alabaster. At the neck was a string of beads of carnelian, faience, steatite, bone and gold.

With a sand-pit burial of a child was found a small necklace consisted of beads of steatite, obsidian and faience. Among the beads is a cylinder of steatite 2.5 cm. long inscribed with the cartouche of King Senusert III (Ḫᶜ-kȝw-rᶜ) of the XII*th* Dynasty. The body was laid on its back, head south, face east and kness partly bent.

New Kingdom (Pls. II-XII)

A lot of New Kingdom graves of different types, varying in depth, were laid bare (Pl. II). In most cases they were of the pit or side-chamber type cut in the solid sand and blocked with crude bricks. Some burials were found in pottery "slipper coffins" (Pl. III) mostly painted with figures of divinities and Hieroglyphic inscriptions. The lids of the

coffins were modelled in the shape of male and female masks, some of which were grotesque (Pl. IV). This type of burial was occasionally found inside mud-brick tombs with flat, gabled or barrel-shaped roof (Pl. V). Family tombs built of mud bricks were also discovered. Pot-burials for children occurred.

The commonest position of the bodies was supine extended with head to the west and hands either by the sides or over the pelvis. Although many of the graves had been plundered by the ancient robbers, yet some objects of great interest were spared. A great variety of pottery vessels of various types and dimensions were found (Pl. VI). Of these is a two-handled jar 61 cm. high, tapering towards the bottom and bearing on its shoulder a Hieratic inscription in black ink. Noteworthy are the foreign types introduced from Greece during the New Kingdom period such as the type of pottery known as "Mycenaean pseudamphora" (1). Toilet objects such as ointment and koḥl-pots of alabaster, faience, steatite, basalt, serpentine, bronze, limestone and koḥl-sticks of bronze and obsidian were discovered. Of special interest is a limestone koḥl-pot 7.3 cm. high with exterior rim and flat base. On the body are alternated designs representing decorative units and figures of a young girl with long tresses (Pl. VII). The bronze mirror 24.5 cm. in length with papyrus-column handle flanked by falcons, is notable (Pl. VIII). The excavations had yielded a collection of various kinds of jewellery such as finger-rings of bronze and silver occasionlly with scarabs; hair-rings of gold, jasper, carnelian, alabaster and shell; necklaces (Pl. IX) and bracelets composed of scarabs, plaques, amulets, pendants, seal-buttons, almonds and beads of various forms and materials as gold, jasper, steatite, carnelian, felspar, amethyst, lapis-lazuli, faience and glass. Some scarabs and amulets were decorated with symmetrical designs, figures of deities and names of kings of the New Kingdom: Thuthmosis I, III, Amenophis II, Seti I and Ramesses II. Few scarabs had the shape of a hedgehog, goose, frog, hare and the face of Goddess Hathor and encircled with a gold band. A big heart-scarab of blue faience 5 cm. long had been placed on the chest. It is inscribed on

(1) This type of pottery relates to Mycenae, one of the most ancient cities of Greece.

the base with a Hieroglyphic text taken from the "Book of the Dead" (Pl. X). Among the amulets is a small rectangular plaque of steatite 1.7×1.5 cm. incised on one side with figure of King Amenophis II (ʿꜣ-ḫprw-rʿ) standing in his chariot, followed by two hounds, shooting an arrow against a lion. On the other side is a scene showing the king worshipping God Amen-rê. Attention should be given to a schist pectoral 9.3×8 cm. in the form of a naos with cornice pierced with two holes for suspension and surmounted by a winged kneeling goddess. The front side has inlays of small plaques of glass covered with a thin coating of gold, in the centre of which is a scarab inlaid with plaster (Pl. XI A). The other side bears a representation of a standing person worshipping Osiris who is seated on his throne wearing the "Atef-crown" and holding the flail and crook in his hands. Behind him is the figure of the Goddess Nephthys standing with upraised hands (Pl. XI B). It is noteworthy to mention here the sets of shawabti-figures of limestone and terra-cotta, mostly of coarse workmanship and painted in red, yellow and black (Pl. XII). A set of nine shawabtis bearing traces of Hieratic inscriptions in black ink were placed inside a rectangular pottery box. Canopic jars of alabaster for keeping the viscera of the dead also occurred.

Roman Period (Pls. XIII - XVII).

The discovered Roman tombs date back to the period from the second to the fourth century A.D., the waning age of paganism in Egypt. Their arrangement within the area does not appear to have followed any regular plan (Pls. XIII, XIV). They were located in three strata at a depth of about seven metres. The tombs varied in size and in shape; the majority being rectangular or square with a barrel-vaulted roof or having the shape of a truncated pyramid. There were few exceptions such as the octagonal and round types. Some tombs still keep traces of painted decorations on their sides. They were built of mud bricks, but in a very few cases there was a casing of burnt bricks. The majority rested on brick platforms, almost square. Each tomb had an arched niche on one side, usually the east. It was against the back wall of the niche that a stela was placed. In few cases the pictures in fresco took

the place of the stelae. A sacrificial altar for offerings was occasionally built in front of the niche. The funerary stelae recovered from the tombs represent the most characteristic feature of the site. They were twenty five in number. The material used for the stelae was limestone with the exception of two made of marble. They were roughly cut to a rectangular shape and mostly given a rounded top[1]. Some still retained traces of colouring. They feature figures either standing with upraised hands in adoration or reclining on matresses placed on couches. Below the couch is the usual banquet scene consisted of a table with dishes, an amphora in a stand and a bunch of stalks of wheat. There is a miscellaneous group with the representation of both standing and reclining figures (Pls. XV, XVI). It is worth noting that family groups were occasionally represented. Of special interest is the limestone round-topped stela with the representation of a young groom harnessing a horse (Pl. XVII). The ancient Egyptain influence is shown by the presence of jackals or occasionally hawks on one or both sides of the figure. Below the figures is an insciption in horizontal lines mostly in Greek and in two cases only in Demotic, giving the name, age of the deceased and the date of his death. The discovered stelae are going to be published by my colleague Dr. Henri Riad, Director of the Cairo Museum.

Burials were found between or beneath the tombs. Some of the deceased were buried in the solid sand with a pottery disk of about 50 cm. in diameter at the head. Evidences of wooden coffins were found. In few instances, there was a decayed coating of gilded stucco over the body; the face being carefully sculptured and painted and hands in relief wore gilt bracelets realistically shown. The majority of the bodies were fully stretched on the back with head to the west and hands by the sides. In certain burials, there were found earrings and finger-rings of gold, silver and iron; bracelets of silver and glass; necklaces composed of beads of gold and

(1) For detailed description of stelae coming originally from the area of Kôm Abû Billo, see Dr. Zaki Ali, "Some Funerary Stelae from Kôm Abou Bellou, 1949" and "More Funerary Stelae from Kôm Abou Bellou, 1953". See also "Funerary Stelae from Kôm Abou Billou, 1961" by Finley A. Hooper.

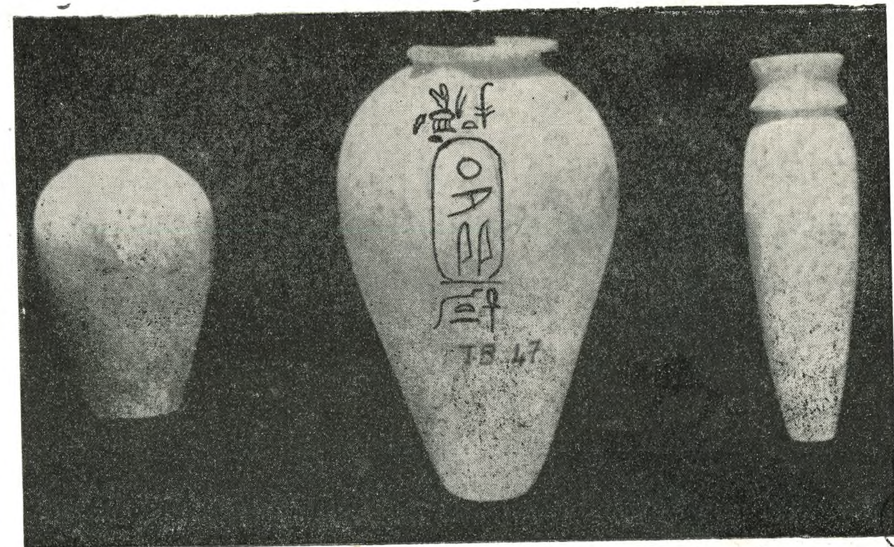
glass; pottery and glass vessels. Bronze coins, mostly defaced, had been placed in the hands, no doubt to pay for the ferry across the Styx(1). In other burials they were placed beneath the skeleton.

Apart from the objects found in the graves, a considerable amount of interesting material, mostly of periods ranging from the Middle Kingdom to the Roman period, was extracted from the debris. Among these were pottery vases, amulets and beads of various materials and shapes and decorated pottery lamps. A rectangular seal of faience 4.5 cm. long, rounded at the top, palmetto back, inscribed on the base with nine bound captives in three rows surmounted by a jackal (2); a damaged head of plaster of Apollo ? 16 cm. high, showing hair-dressing and two lanterns of terra-cotta 18 and 12 cm. high pierced with holes for suspension and decorated in relief with figures of a cobra and Harpocrates, are worthy of attention.

SHAFIK FARID

(1) Styx is the name of the river encompassing Hades in Greek mythology.

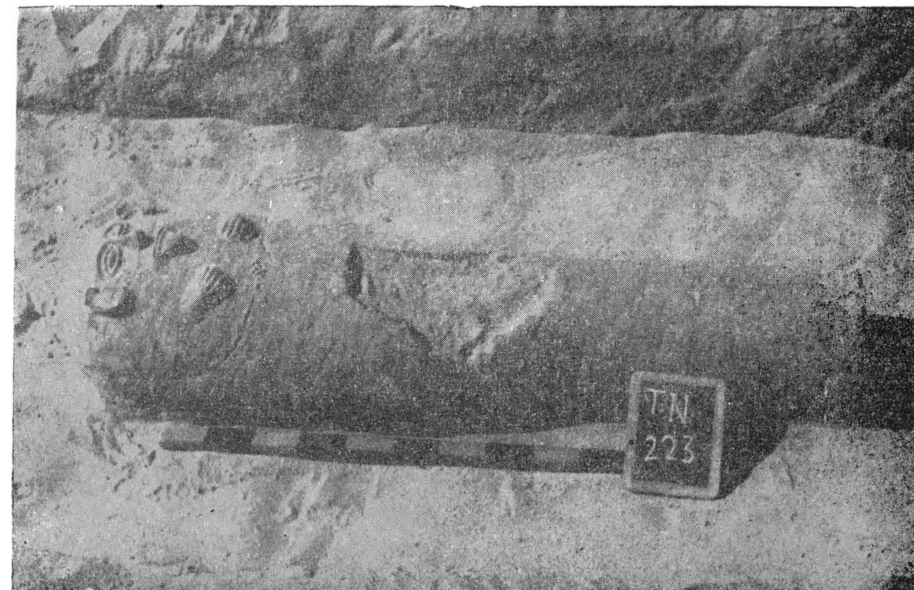
(2) The same symbol of the seal of the necropolis of Thebes.



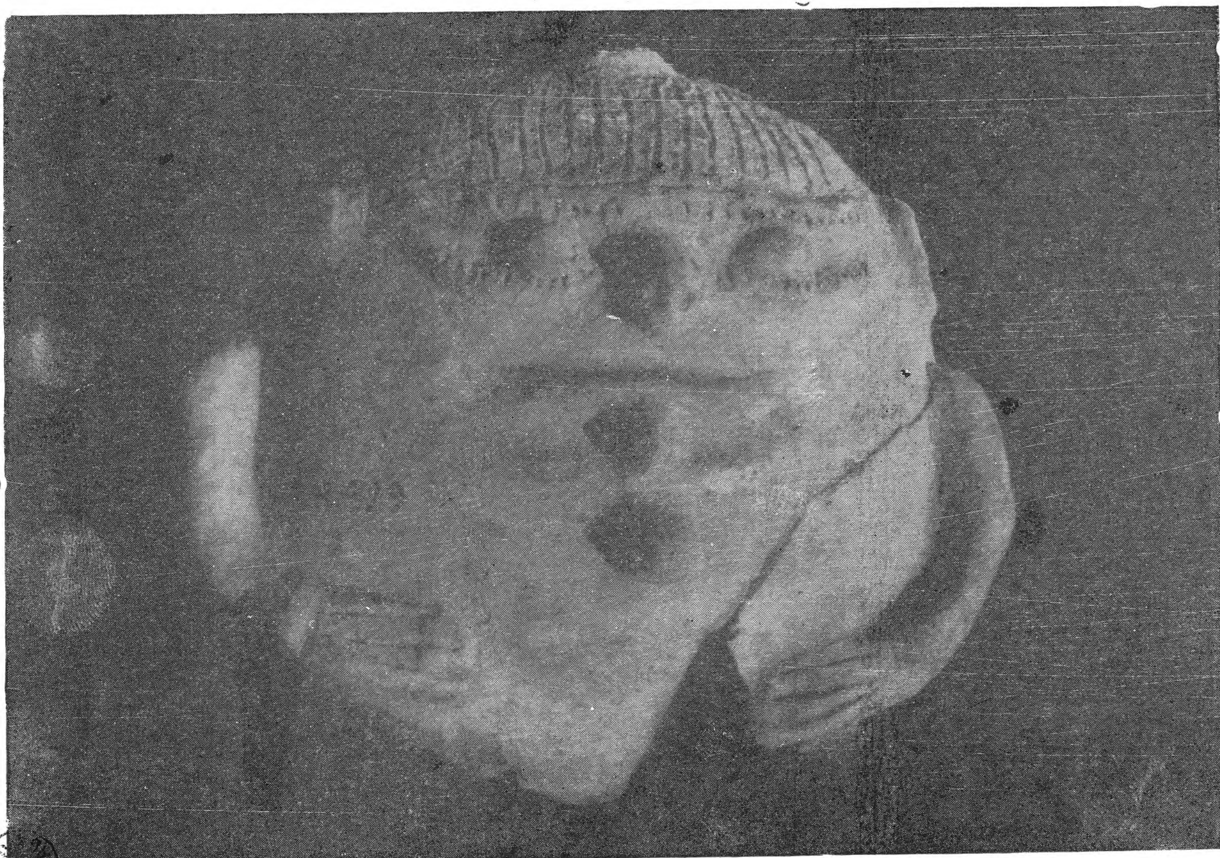
Group of three alabaster vases. Note the cartouche of Pepi I (Mry-rʿ) on the vase in the centre.



View showing part of the New Kingdom site.

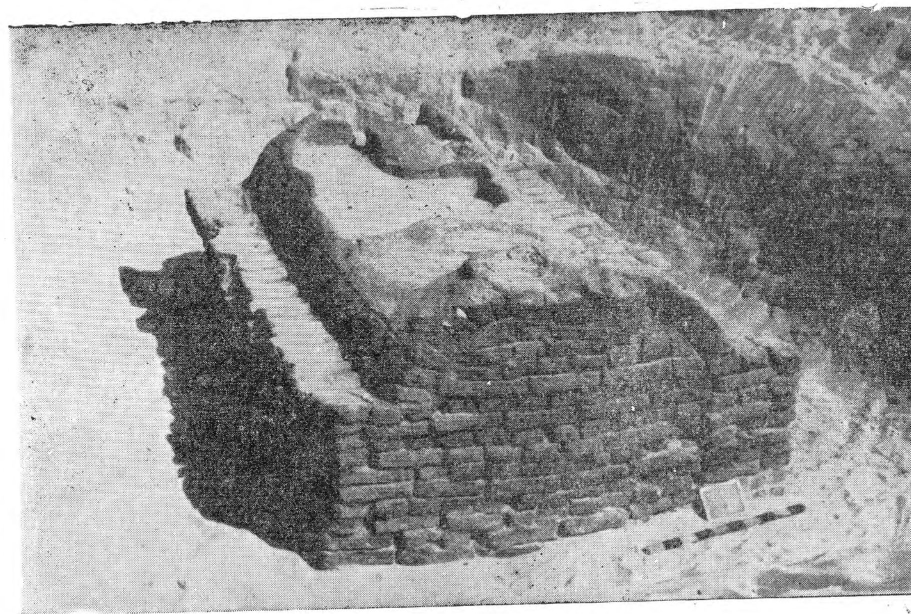


Slipper coffin showing the break made by the ancient robbers.



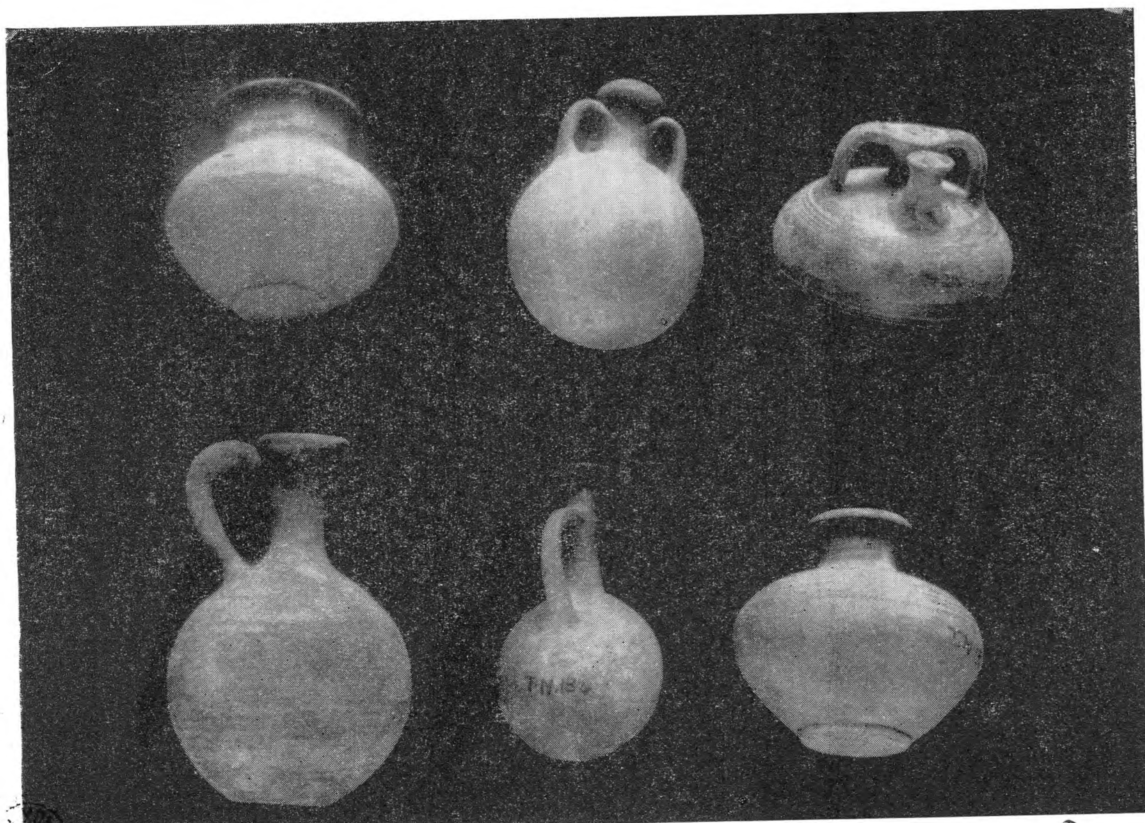
A grotesque mask.

Pl. IV



Brick-built tomb with barrel-shaped roof. A hole forced in the roof by the robbers.

Pl. VI

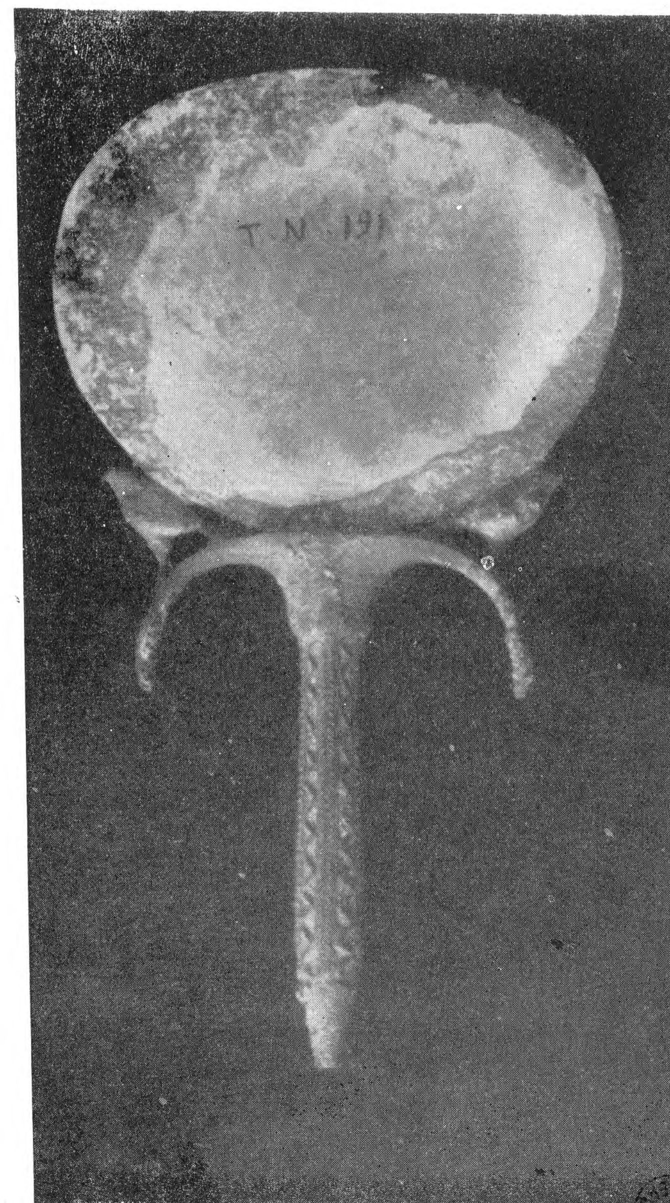


Pottery vases of various types. Note the "Mycenaean pseudamphora" (top to the right).

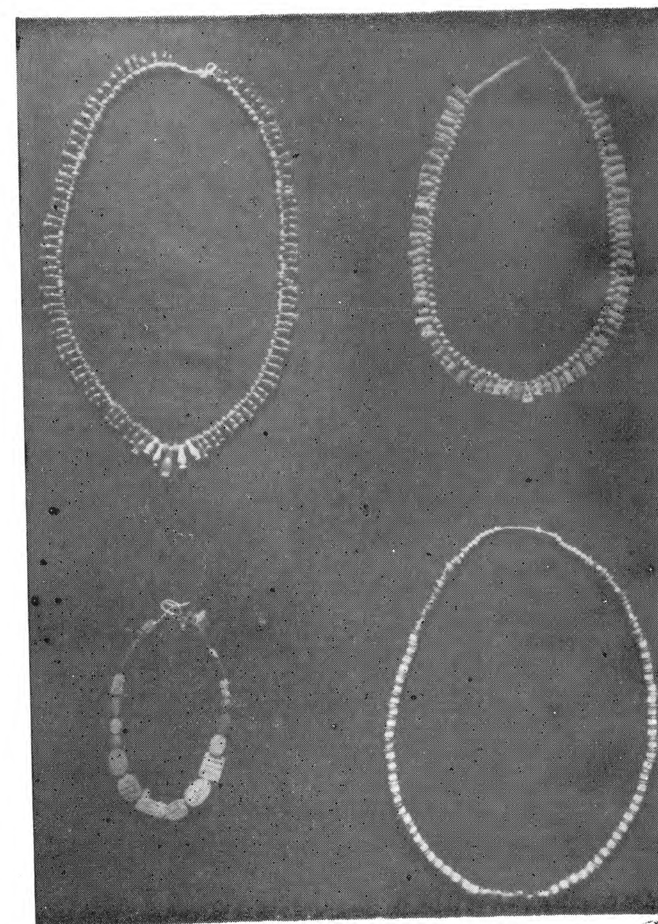




The decorated koḥl-pot.



The bronze mirror.



Four necklaces composed of scarabs, amulets, pendants and beads of various materials.



Heart-scarab inscribed on its base with a Hieroglyphic text taken from the "Book of the Dead".



(*A*).—The front side of the schist pectoral.



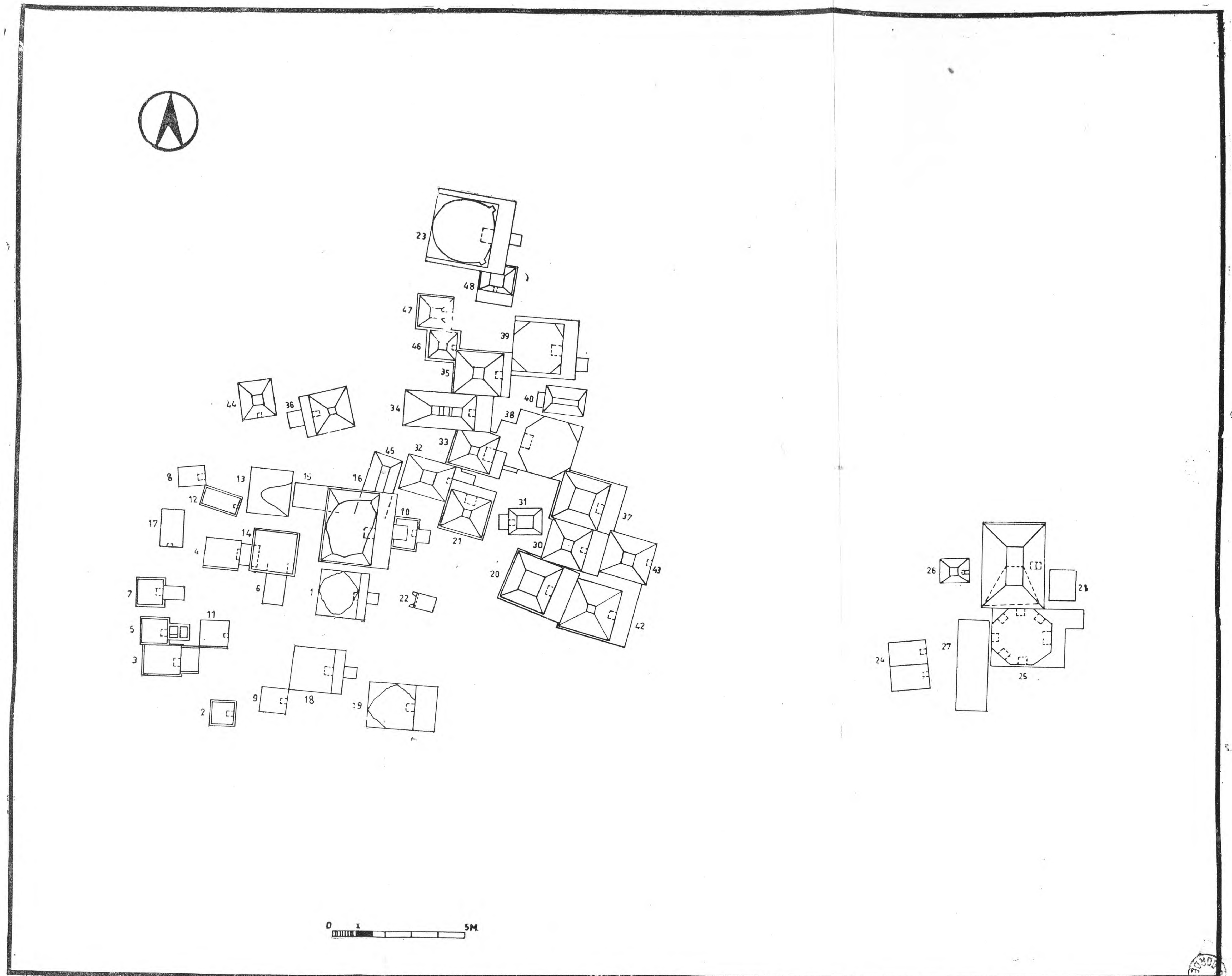


(*B*).—The other side of the pectoral.



Three shawabtis of limestone and terra-cotta. The one in the centre holds two hoes.

Pl. XII



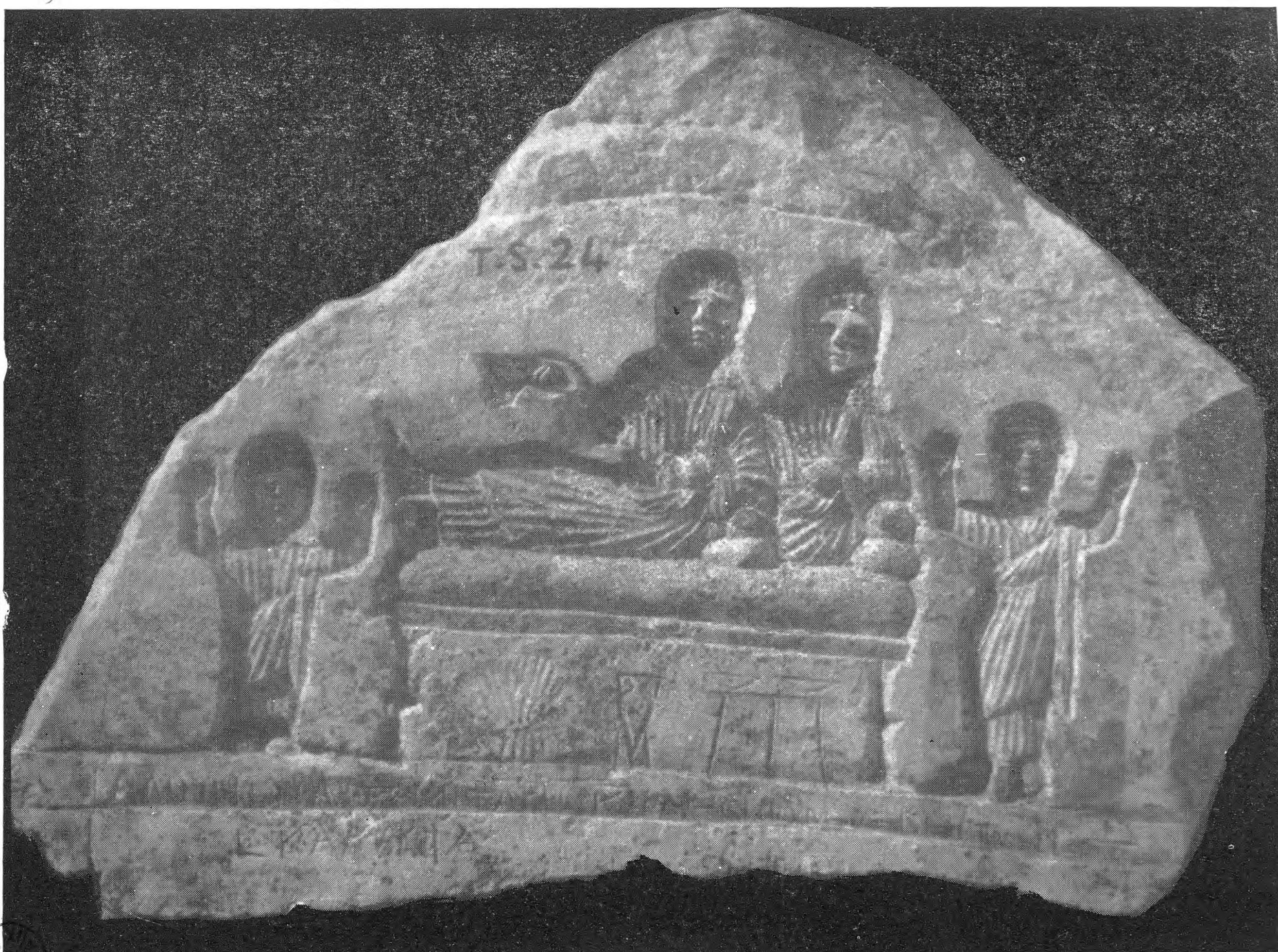
General plan of the Roman tombs located at the south of the Kôm

Pl. XIV



View showing part of the Roman cemetery.





Funerary stela of limestone 34 cm. high, edges missing. Relief representing two females reclining on a couch and dressed in chiton and himation. Below the couch is the usual funerary banquet. At bottom is a Greek inscription in two lines. On either side of the scene is a standing figure with upraised hands.

Pl. XV



Funerary stela of limestone with a female figure standing with upraised hands in adoraton. She wears a chiton and himation. The hair is parted in the middle and hangs down in shoulder tresses. On either side of the figure is the jackal, the symbol of Anubis, god of the cemetery in ancient Egypt. Above the head of the girl is something like a shawl ending in fringes. This sort of shawl is still used by some of our women on occasions of mourning. Below is a Greek inscription giving the name of the deceased and her age



Round - topped stela of limestone 29 cm. high showing a groom harnessing a horse.

Pl. XVII

BRIEF REPORT ON THE EXCAVATIONS OF THE ANTIQUITIES DEPARTMENT AT TAFA (1960)

BY

SHAFIK FARID

The construction of the Sadd el-Aali (High Dam) made it necessary to rescue the great legacy of Nubia before being submerged forever beneath its waters. The temple of Tafa (1) (Pl. I *a*) which lay on the west bank of the Nile, about 50 kilometres to the south of Aswan, was the first to be saved as it stood at a lower level. The dismantling of the temple began on the 10th of July 1960 by Ahmed Lutfy, the architect of the Antiquities Department. At the same time, recording was carried out by the Centre of Documentation.

After removing the stones from the temple (2) (Pl.I *b*), I made soundings with the collaboration of my able assistant Mahmoud Abd El-Razik at the four corners and found that the foundations consisted of five or six courses of sandstone masonry varying in depth from 1.50 m. to 2.50 m.

The excavation of the floor in the interior of the temple revealed two parallel walls running N-S. The purpose of these walls was to support the four columns within the building. The space between these two walls, as well as the space between each one and the foundations of the temple, was found to be full of Nile mud. In this mud a sandstone libation basin in the shape of a sacred lake 26 × 25 × 11 cm. high and an altar of the same material (Pl. II) were found.

---

(1) This temple, of the Roman period, was left unfinished and has no mural reliefs. Its façade faces south, and has two columns with elaborate floral capitals. Within, the building consists of a single chamber, with another four columns, also with floral capitals. For detailed description of the temple, see Roeder, *Debod bis bab Kalabsche*, pp. 189-209, cf. also Weigall, *A Report on the Antiquities of Lower Nubia*, pp. 64-67.

(2) The stones of the temple have been transferred to be rebuilt in Holland which contributed to the program of the salvage of Nubian monuments.

About 2.60 m. to the south of the façade, remains of a large structure, perhaps the relics of a platform, were laid bare. The structure was constructed of sandstone blocks and measured 14.05 × 13.80 m. Upon its ruins stood the remains of buildings of rubble, including rooms and halls which had almost entirely disappeared and only some walls varying in height between 0.50 and 1.00 m. remained (Pl. III). In the course of clearing the debris, a considerable amount of interesting objects of sandstone came to light. Among these is a fragment representing the figure of a standing divinity holding a sceptre in his right hand and the symbol of life (Ankh-sign) in his left. The head is missing and the body still bears traces of yellow paint (Pl. IV). Another fragment represents the figure of a mermaid in high relief (Pl. V). Part of a lintel of a portal with two rows of winged sun-disks, a cavetto cornice and a row of uraei, a block with floral pattern (Pl. VI), a decorated libation basin and a big oblong block with two circular holes were also found.

It is worth mentioning, that some parts of the platform were concealed under the embankment constructed by Barsanti in 1910 to protect the temple from inundation, while other parts were buried in the mud. Fragments from ornamented lintels were built into the recent embankment.

About 200 m. to the west and 250 m. to the north-west of the temple lay the remains of six houses built of large sandstone blocks similar to those used in the construction of the platform. They were almost buried in the mud and are supposed to have been built in the same period as the temple. Most probably they formed part of a fortified camp where the soldiers guarding the caravan-routes were stationed.

The first house is square occupying little more than 86 square metres (Pl. VII *a*). Its actual height is 1.75 m. and the thickness of its walls varies between 65 and 87 cm. The house consists of two rooms and one hall, and in the debris were found a terra-cotta lamp, some pottery vases, an alabaster vase, part of a decorated lintel and the base of a pottery cup with design of a cross in yellow.

The second house is oblong, measuring 10.90 m. by 13.60 m. and 2.50 m. high (Pl. VII *b*). It comprises four rooms and a hall. In the debris were found pottery plates and decorated fragments of sandstone.

The third house, of which only the foundations are left, consists of six rooms, in the midst of which is a great hall. It is to be noted that some of its stones bear quarry marks. The length of its walls are : on the south side 16.95 m., on the north 17 m., on the east 15.80 m. and on the west 15.60 m. A sandstone fragment decorated with heads of cobras surmounted by the sun-disk was found in the debris.

The fourth house lies to the south of the third one and is separated from it by a street about 6 m. wide. It has six rooms in two rows with a great hall. The length of the north, south, east and west walls is 16.05 m., 16.05 m., 16.65 m. and 15.40 m. respectively. In the debris were picked up a lintel ornamented with a winged sun-disk and a row of cobras (Pl. VIII), and a fragment of a lintel with part of a winged sun-disk and a row of cobras.

The fifth house lies 1.70 m. to the west of the fourth house. It is oblong and measures 78 square metres. No objects were found there.

The sixth house lies to the east of the third and fourth houses and covers an area of about 300 square metres. The entrance faces the south. The block lying to the left of the entrance bears an ornamental lion's head in high relief. In the filling of the house was uncovered part of a cornice decorated in high relief with the upper part of a figure of a woman holding a sistrum in her left hand and a tambourine in her right, and on her right side the upper part of another figure holding a lute (Pl. IX).

During the course of clearing the floor of the military fortifications situated on a hill less than one kilometre to the south of the temple, parts of a sandstone cornice with carvings in high relief representing uraei and a winged sun-disk, were found. These buildings are now known as "Deir Tafa" (Monastery of Tafa), and they were given by Roeder the

name of "Bergkapelle" (Hill Chapel)([1]). It is supposed that they were built in the same period as the above mentioned Roman houses, and after the stone structure had been demolished, mud-brick buildings were constucted on their foundations in the Coptic period. The walls of these later buildings were coated with mud-plaster on the inside, over which Coptic inscriptions were engraved. This fact is evidence that they were used during that period as a Coptic monastery.

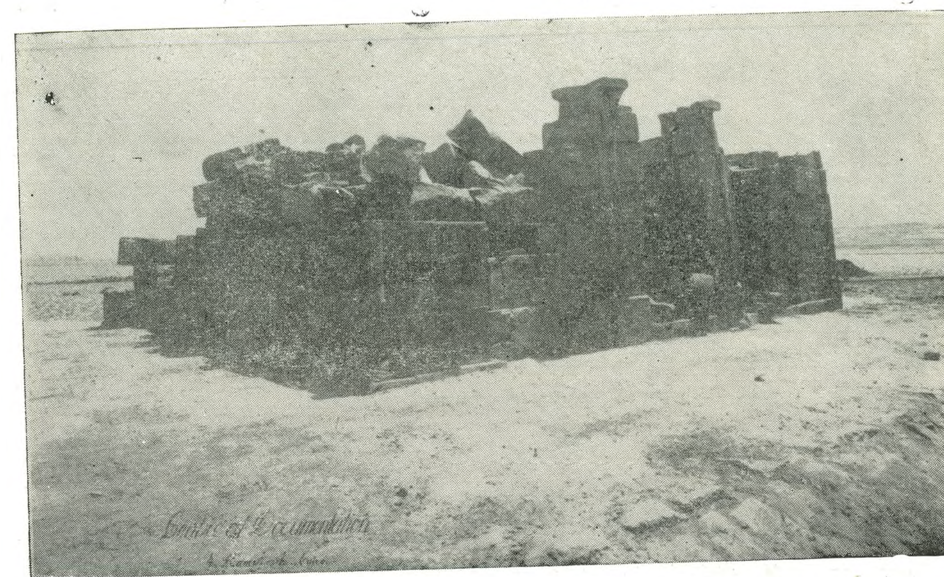
Close to the rock-cut niche lying about one kilometre to the west of the temple were picked up fragments of cornices decorated with rows of uraei and winged disks.

About 330 m. west of the temple lies a Coptic tomb hewn in the rock (Pl. X). Its entrance, which faces west, leads into a rectangular hall ending in acavity. In the north and south sides of the hall were two other rectangular cavities. Nothing was found in this family tomb.

In addition, eleven Arabic grave-stones with Kufic inscriptions were found in the small mausoleum called "Sheikh Baḥr", about half a kilometre to the west. They have been transferred with the other discovered objects to Aswan museum on the island of Elephantine.

Shafik Farid

([1]) See Roeder, *ibid.* pp. 206-209; Weigall, *ibid.* p. 66.



A.— Temple of Tafa before removal.



B.— The Temple after removal.





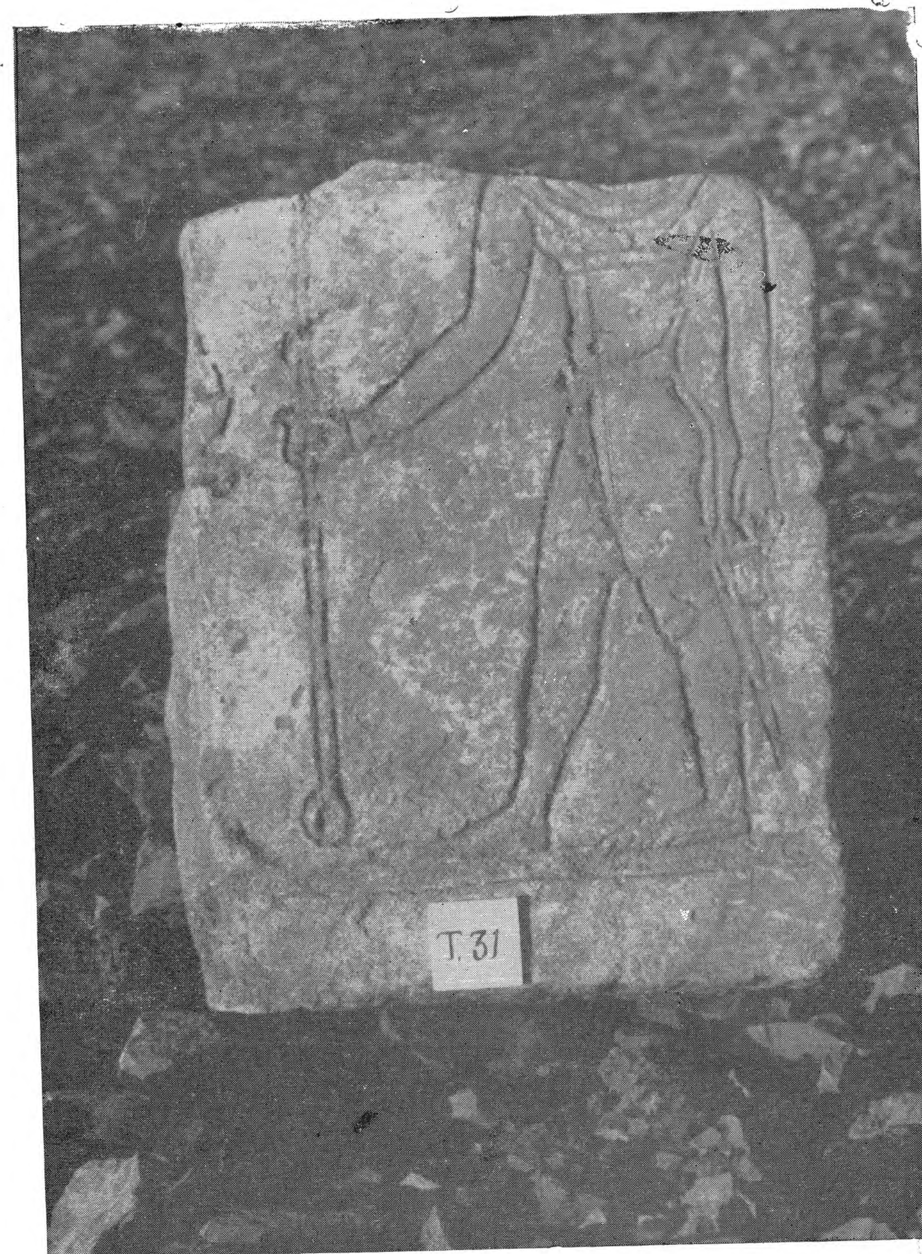
Sandstone altar.



View of the platform showing the rooms constructed upon its ruins.

PL. III

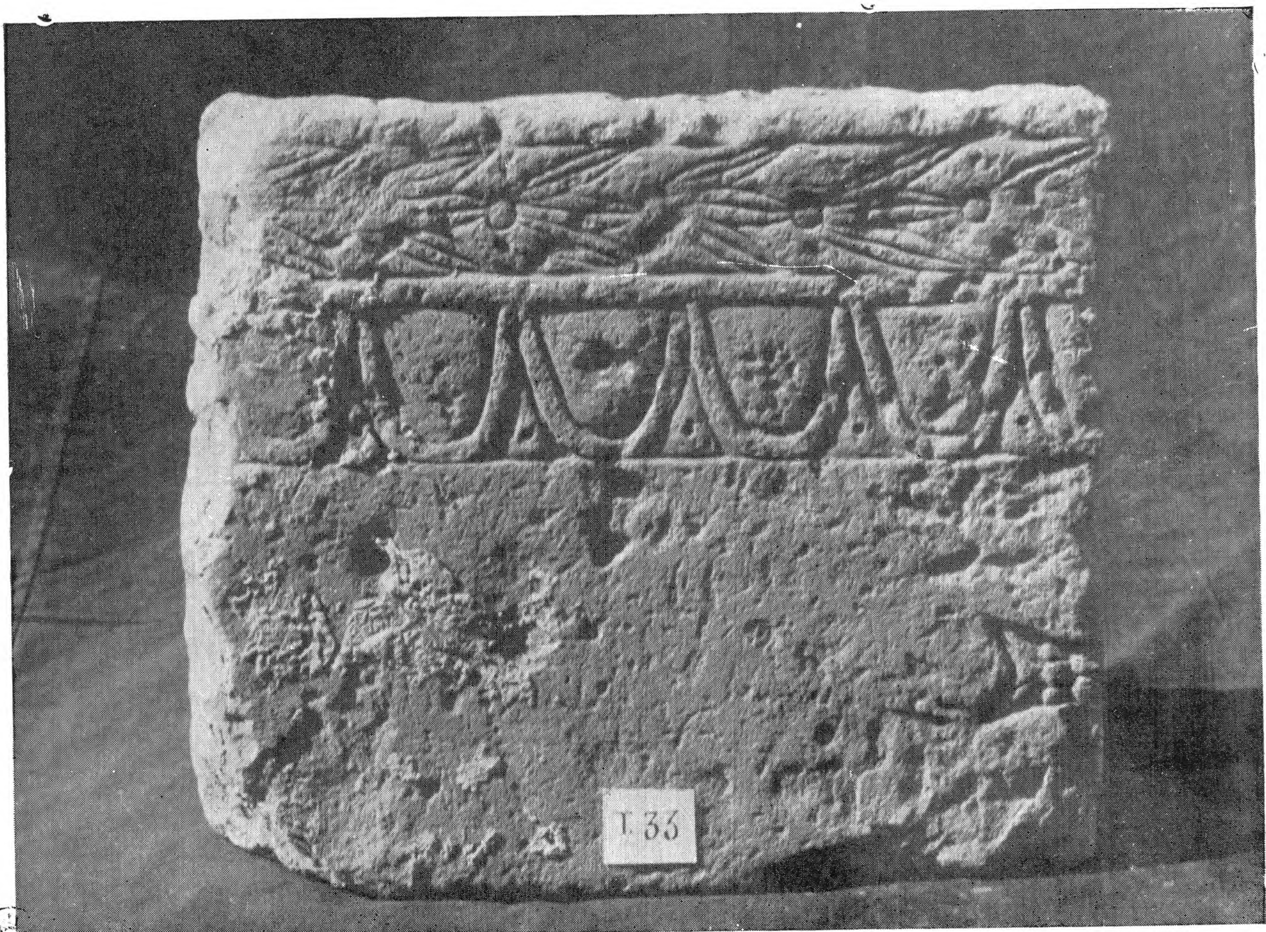
Pl. IV



Sandstone fragment representing a standing divinity.



Sandstone fragment with figure of a mermaid.

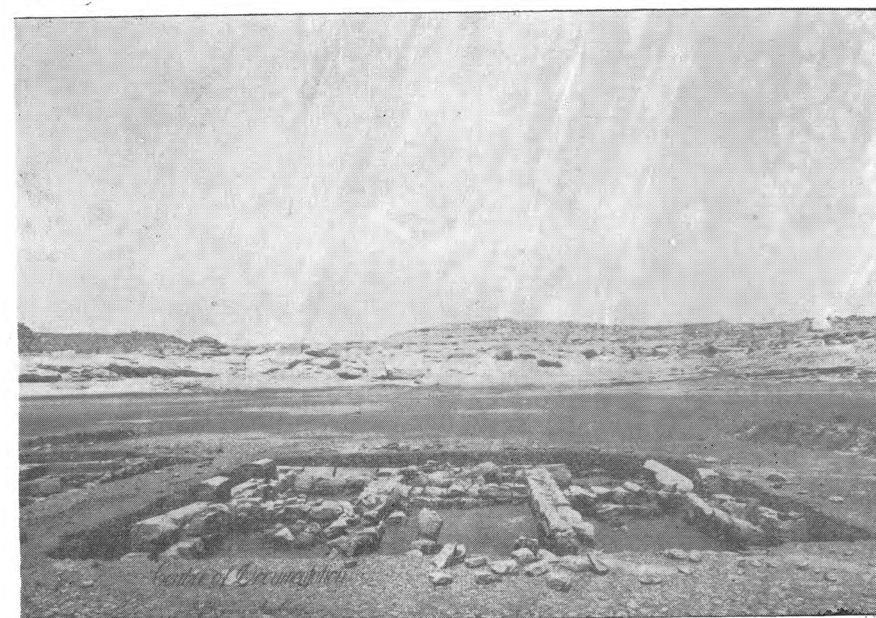


Sandstone block with floral pattern.

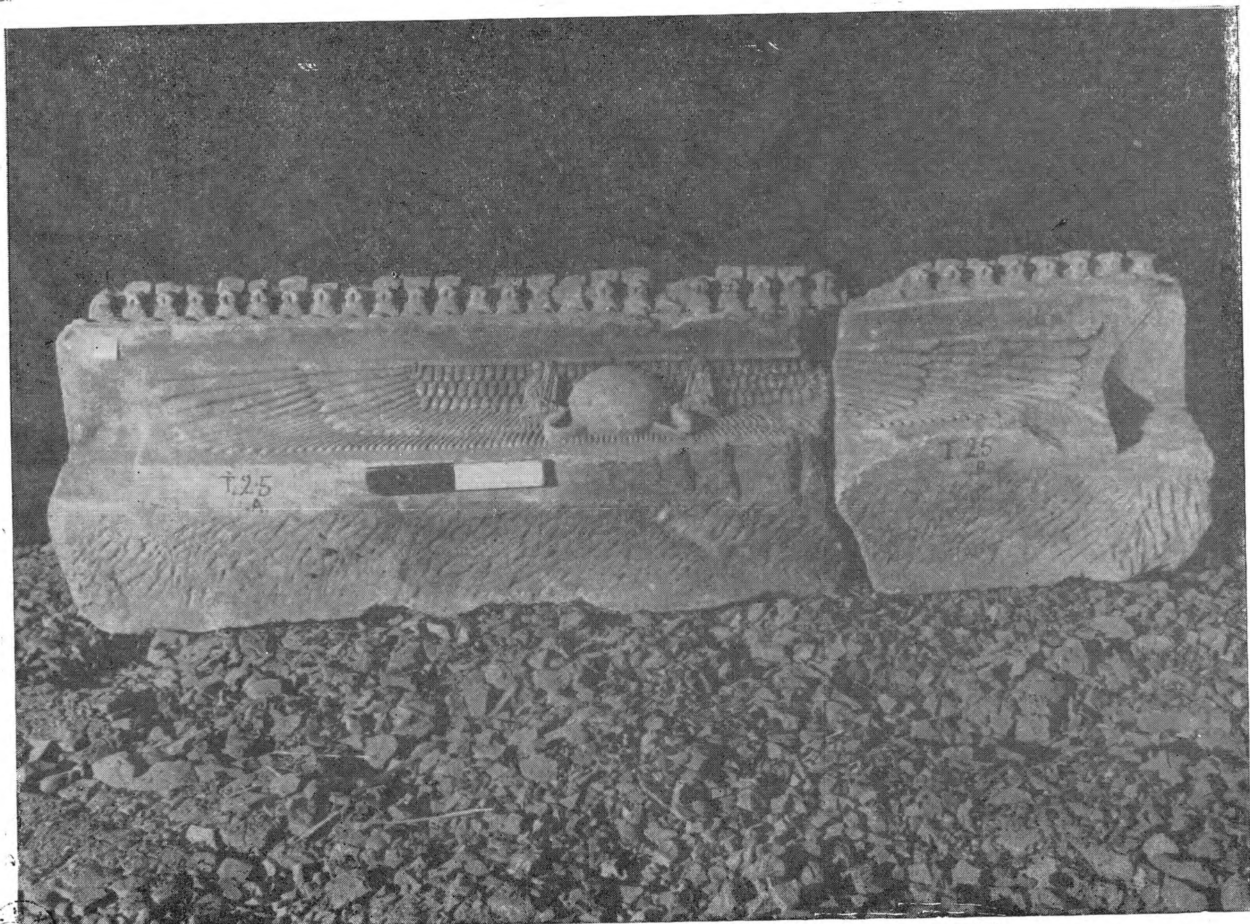
Pl. VI



A.—View of house No. 1.

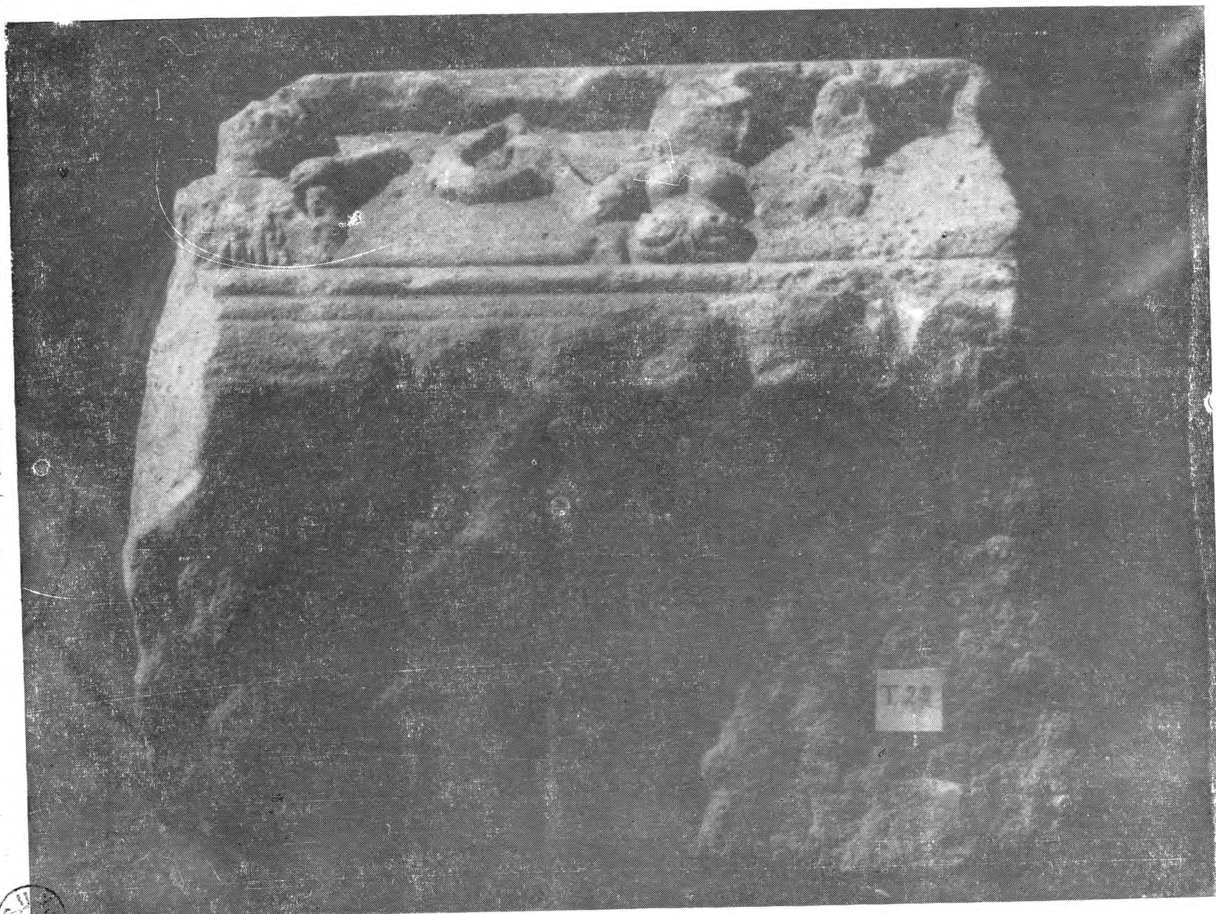


B.—View of house No. 2.



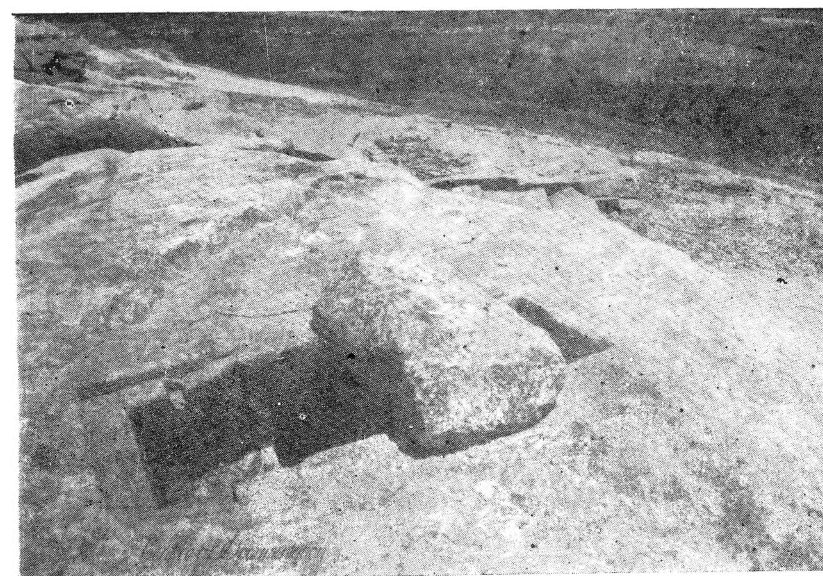
Sandstone lintel ornamented with a winged disk and a row of uraei.

Pl. VIII



Part of a sculptured sandstone cornice.

Pl. IX



The Coptic Tomb.

EXCAVATIONS OF THE ANTIQUITIES DEPARTMENT AT QUSTUL

Preliminary Report (Season 1958)

BY

SHAFIK FARID

Owing to the enormous quantity of objects of all kinds discovered at Ballana and Qustul, it was difficult to give a detailed study of them in an excavation report. The results of the excavations at Ballana have been therefore published by the Antiquities Department in one volume, "*Excavations at Ballana*, 1963". A preliminary report also appeared in the "*Fouilles en Nubie*, 1963".

Here is a brief report on the excavations at the cemetery of Qustul[1] which lay on the east bank of the Nile, about ten kilometres to the south of Abu Simbel and opposite the cemetery of Ballana.

The excavations covered a period of about two months from the 11*th* of February to the 8*th* of April 1958[2] and disclosed 43 tumuli tombs left unexamined by Prof. Emery in the belief that they had been already plundered and unworthy of excavation[3]. The tumuli, piled over the tombs, were scattered over a sandy plain of about 50 acres[4] (Pl. I *a*). They consisted of enormous masses of greenish-brown alluvial soil from the neighbourhood. Their shape is exactly the same as that of the tumuli of Ballana but they differ only in their smaller size and absence of dolorite pebble covering

(1) The full text of this work will be shortly handed over to the Department of Antiquities for publication.

(2) This archaeological survey was the first of a series of excavations carried ou in Nubia by Egyptian and foreign expeditions before being submerged forever by the waters of the Sadd el-Aali (High Dam) at Aswan. Work was supervised by Dr. Selim Hassan and directed by Zaki Saad and Shafik Farid with the collaboration of Ahmed Es-Sawy and Mohamed Mohsen.

(3) See Emery, "*The Royal Tombs of Ballana and Qustul,*" published in 1938.

(4) The natives called the Tumuli of Qustul "Goha", a legendary figure in Arab fiction.

(Pl. I *b*). The size of the tumuli corresponds to the size of the tombs cut in the alluvium and, consequently, varies from 6 to 27 metres in diameter and from one metre to 5 metres in height.

The commonest type of tombs was formed by a pit cut in the hard alluvium to an average depth of two metres with a side chamber sealed up with mud brick or stone blocking.

The tombs were found plundered and most of their contents were robbed. The plunderers had entered them through a passage cut from the west side of the tumulus or through the top by the partial removal of it.

Some of the human remains were scattered inside and outside the burial chambers while others were found in the robbers' passage (Pl. II *a*, *b*). The sacrificed domestic animals such as dogs, camels, donkeys and cattle were buried in the debris of the tumuli and in the ramps or pits of the tombs [1] (Pl. III).

Here, as in Ballana, the tombs were built by the Blemmyes who occupied Lower Nubia at the X-group period between the 3*rd* and the 6*th* centuries A.D. filling the gap between the Meroitic and Christian eras.

On the ground surface of some tumuli and between them were about 160 graves of 17 types according to their forms[2]. They date back to the Archaic, New Kingdom, Meroitic and X-group periods. Most of these graves have been plundered.

CONTENTS OF THE TOMBS [3]. —The objects found in both tumuli tombs and graves can be classified as follows according to their categories :—

---

[1] The report on the human remains by Dr. Ahmed El-Batrawi and that on the osseous remains of domestic animals by Dr. Mohamed El-Hagri will be published in our full report.

[2] For grave types see Emery, "*The Excavations and Survey between Wadi Es-Sebua and Adindan*", Vol. I, p. 481 ff.

[3] Registered in Cairo Museum, Journal d'entrée, Nos. 90256-90784 and in Temp. Nos. 9-11-65 from 1 to 81.

(1) *Jewellery* (Pls. IV, V).

There is a good lot of different kinds of jewellery worn by the deceased or deposited in their burials. The commonest of these were necklaces composed of beads of glass, semi-precious stones and gold (Pl. IV) ; decorated bracelets of silver, bronze and iron and anklets of iron. The silver, iron and bronze finger rings are very remarkable as they have bezels engraved with designs representing an eagle, a lion, a cross, a falcon, a crescent, an Egyptian deity holding palm-branches, emblem of longevity. The iron finger ring with circular bezel engraved with the figure of the Archangel Michael is of particular interest as he is represented with outstretched wings and holding a cross. To this group belong the rings used as finger rings and at the same time as keys for the jewellery caskets. The most common type of silver earrings has the form of a horn above a vase-shaped column to the base of which is attached a ball (Pl. V). There is a lot of scarabs and amulets of limestone, faience, silver, carnelian and glass.

(2) *Weapons* (Pl. VI *a*, *b*).

They consist of ivory and wooden hilts of swords shaped to fit the fingers, parts of bronze and iron spears, iron daggers, arrow-heads of iron, leather arrow quivers and a stamped leather armour. The most remarkable are perhaps the archers' finger looses in the form of truncated cones. They are of mottled porphyritic rock, wood, steatite (Pl. VI *a*). Over the left hands of some warriors were placed leather archers' bracers (Pl. VI *b*).

(3) *Donkey and Camel Equipment* (Pl. VII).

With the sacrificed domestic animals such as donkeys and camels were found saddle fittings and iron bits. Bells, mostly of bronze, were found attached to cords fastened round the necks of these animals. The number of bells attached to each cord varied from one to eleven and conformed to 12 types (Pl. VII). The most interesting is the bell decorated with embossed cross-sign on one side and the Egyptian "Ankh"-sign on the other side.

(4) *Caskets of wood*, destroyed by moisture. Decorated with ivory and bone inlays representing eagles, crosses, lozenges, circles, human figures and floral designs (Pl. VIII).

(5) *Metal Vessels* (Pl. IX *a*).

Four bronze bowls of different shapes and size were picked up from the burial chambers. One was found inverted on a pottery vase. The iron frying-pan is remarkable as it has a spout and folding handle decorated with symmetrical designs.

(6) *Glass* (Pl. IX *b*).

A few number of glass vessels escaped the depredations of ancient plunderers. They consist of cups, bowls of white and blue colours.

(7) *Toilet Utensils* (Pl. X *a*, *b*).

The articles of toilet include decorated koḥl-pots and ointment vases of wood, ivory and ebony (Pl. X *a*). To this group belong the bronze, iron and ebony koḥl-sticks decorated with notches and grooves. The brass spoon is worthy of mention (Pl. X *b*).

(8) *Leather Work* (Pl. XI *a*, *b*).

Besides the leather armours, arrow quivers and archers' bracers mentioned under the category of weapons, there was found a collection of sandals (Pl. XI *a*) and bags. The most remarkable of the decorated fragments is that which bears stamped figures of two similar Meroitic gods in the form of a hawk - headed crocodile. On the head rests the "Atef" crown and the hand holds a staff terminated in "Ankh"-sign similar to the cross-sign (Pl. XI b).

(9) *Tools.*

They include iron adze blades, hoe-blades and ingots. Bronze piercers and bone needles were also found. It is worthy to mention here the iron plane.

(10) *Textiles* (Pl. XII *a*, *b*).

Fragments of woolen and linen cloth woven with designs of polychrome tapestry were examined by Dr. Hishmat Messiha who found that they date back to the third and fourth centuries A.D. Scanty fragments of silk also existed.

(11) *Offering Tables.* (1) (Pl. XIII).

Three sandstone offering tables were picked up from the debris of the tumulus of Tomb No. 3. They bear representations in relief of libation vases and loaves. The Meroitic inscriptions contain prayers to Goddess Isis with names of the dead who offered them.

(12) *Pottery* (Pl. XIV).

A great quantity of pottery vases of various types have been discovered in both tumuli tombs and graves of the cemetery. They consist of amphorae, bottles, flasks, plates, bowls and cups. In order to give a possible record of the pottery vases, it has been necessary to classify them into 65 types according to their forms. The pottery found in the tumuli tombs dates back to the X-group period between the 3*rd* and the 6*th* centuries A.D. On the other hand the graves of the cemetery yielded pottery vessels of that date and of the earlier periods, namely the Archaic, the New Kingdom and the Meroitic.

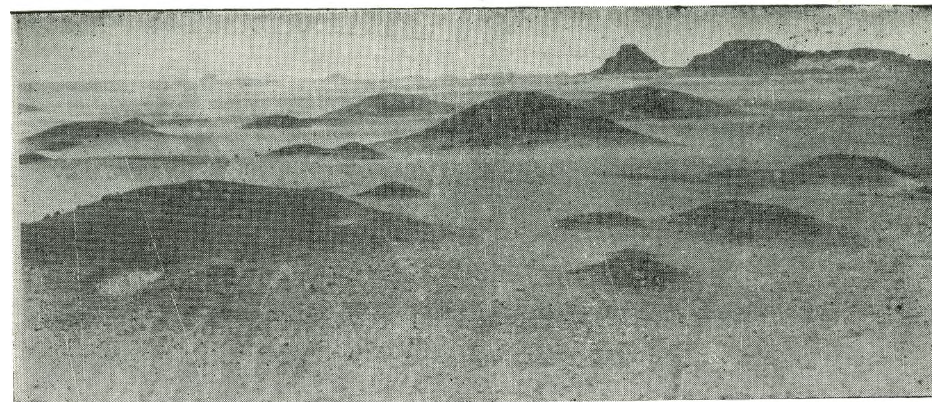
Some pots contained samples of butter-fat or some kinds of fatty oils. Dr. Zaki Iskander who examined these samples tells us in his report which will be included in our volume that they were intended to be used by the owners of the tombs for eating or cooking.

(13) *Miscellaneous Objects* (Pl. XV).

Many other objects were uncovered, among which were lamps of bronze and pottery, an ointment vase of alabaster, an iron door key, an iron collar attached to a chain of the same material, a basket of palm-leaves, cords of plaited linen and palm-fibres, wooden spindle whorls, ivory pieces for the gaming board, decayed fragments of painted wooden coffins with Hieroglyphic inscriptions and a group of clay male and female figurines (Pl. XV).

Shafik Farid

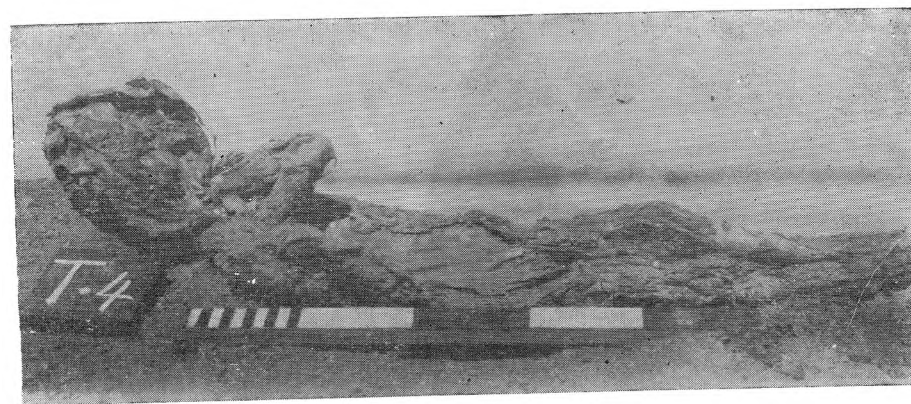
(1) For further description, see Dr. Mohamed Bakr, *Kush, Vol. XII, 1964, Drei Meroitische Opfertafeln aus Qustul.*



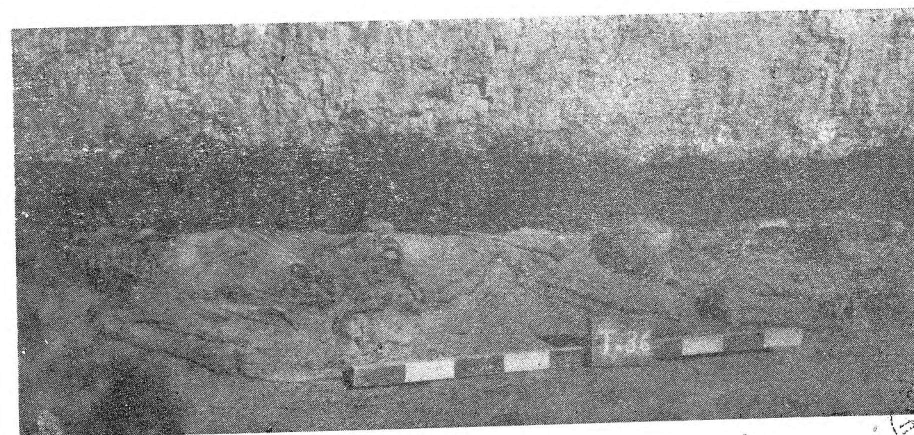
A.– General view of the Southern group of the Tumuli



B.– Tumulus of Tomb No. 20 in the course of removal of the debris



A.—Skeleton of a child buried in the debris of Tumulus of Tomb No. 4.



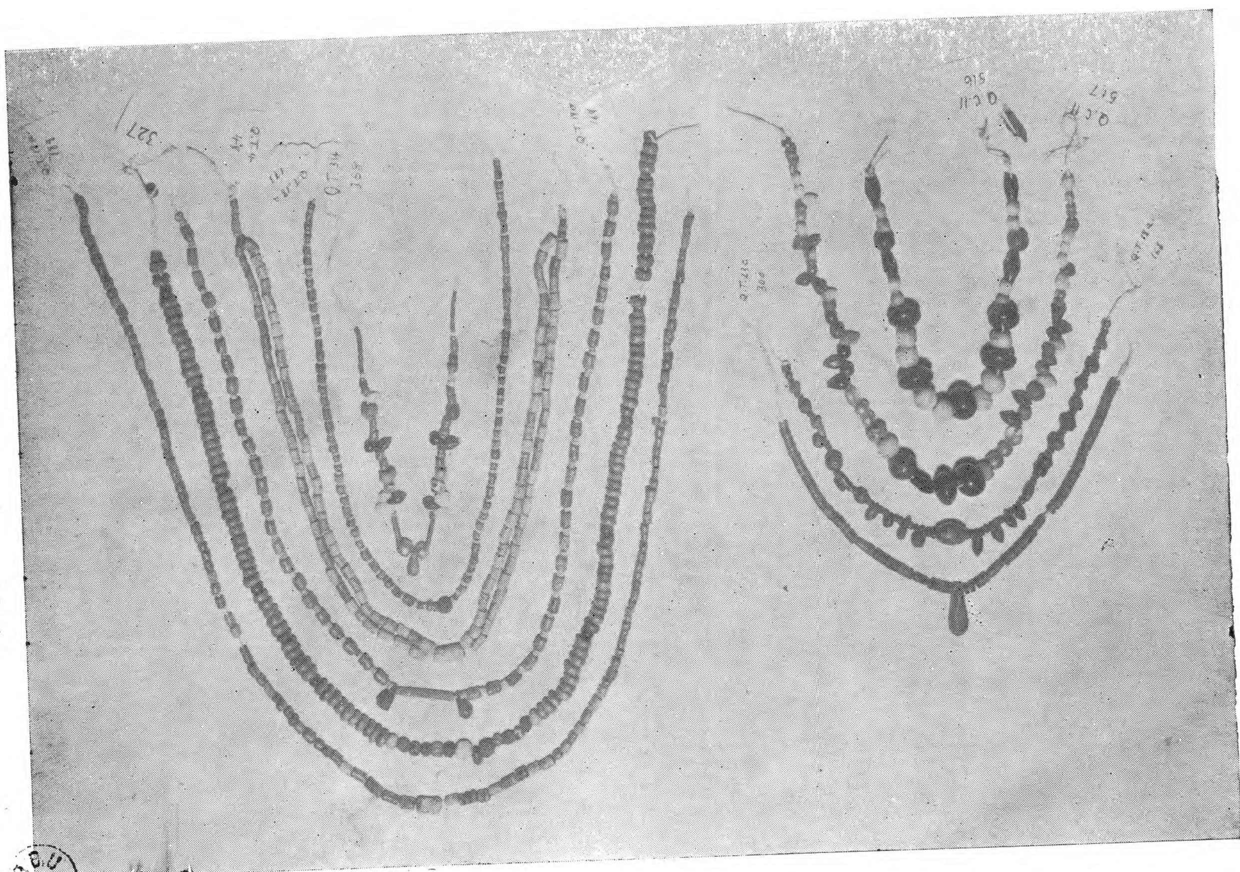
B.– Two bodies buried in the cavelike room of Tomb No. 36.

Pl. III

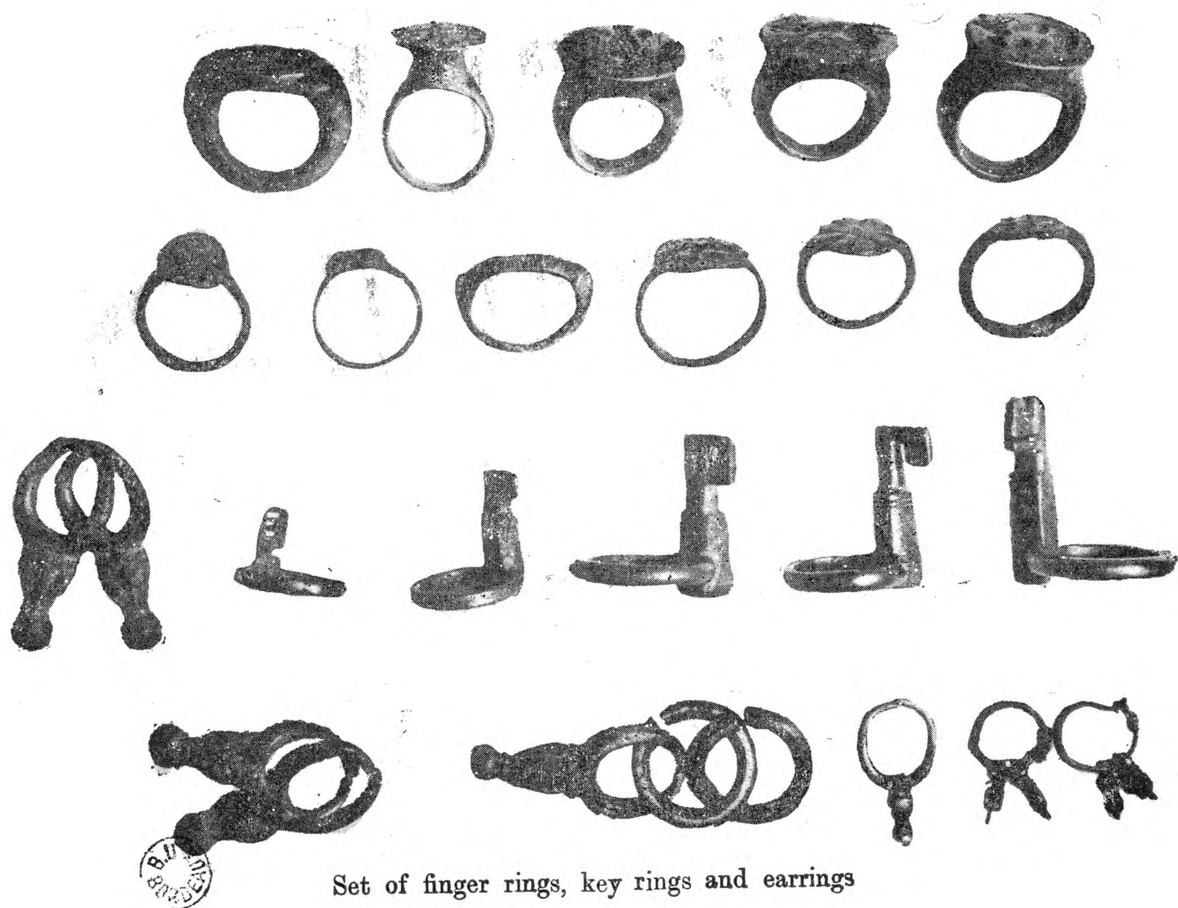


Camel, donkey and dog. From the pit of Tomb No. 35

Pl. IV

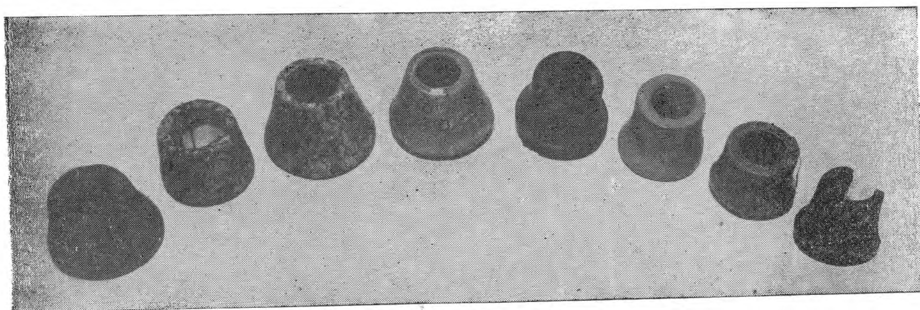


Collection of necklaces composed of beads.



Set of finger rings, key rings and earrings

Pl. V

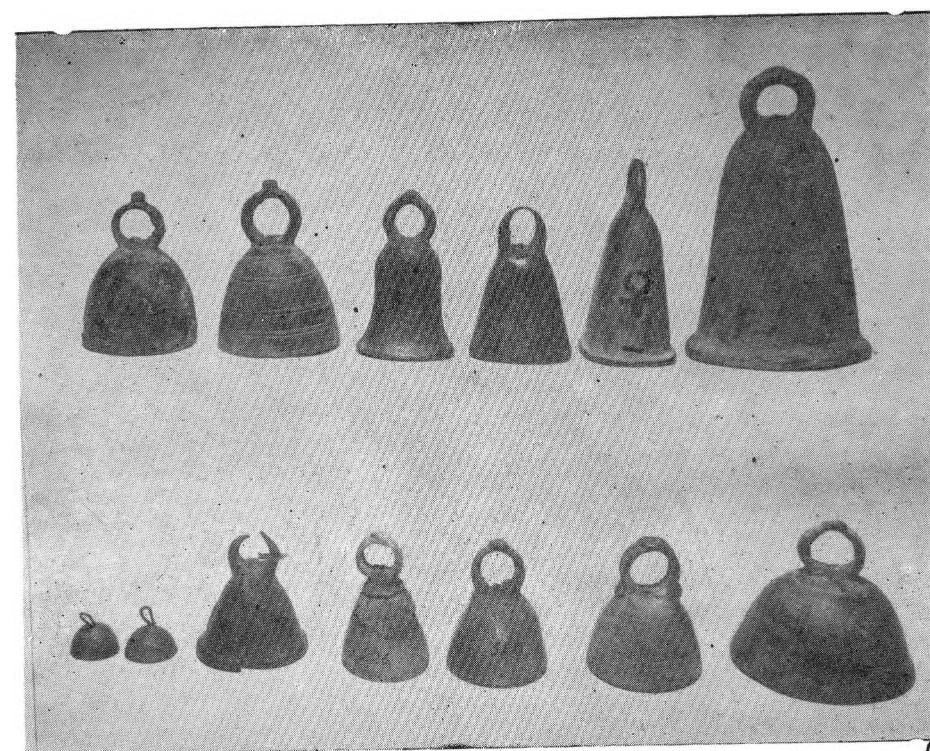


A.—Archers' finger looses.

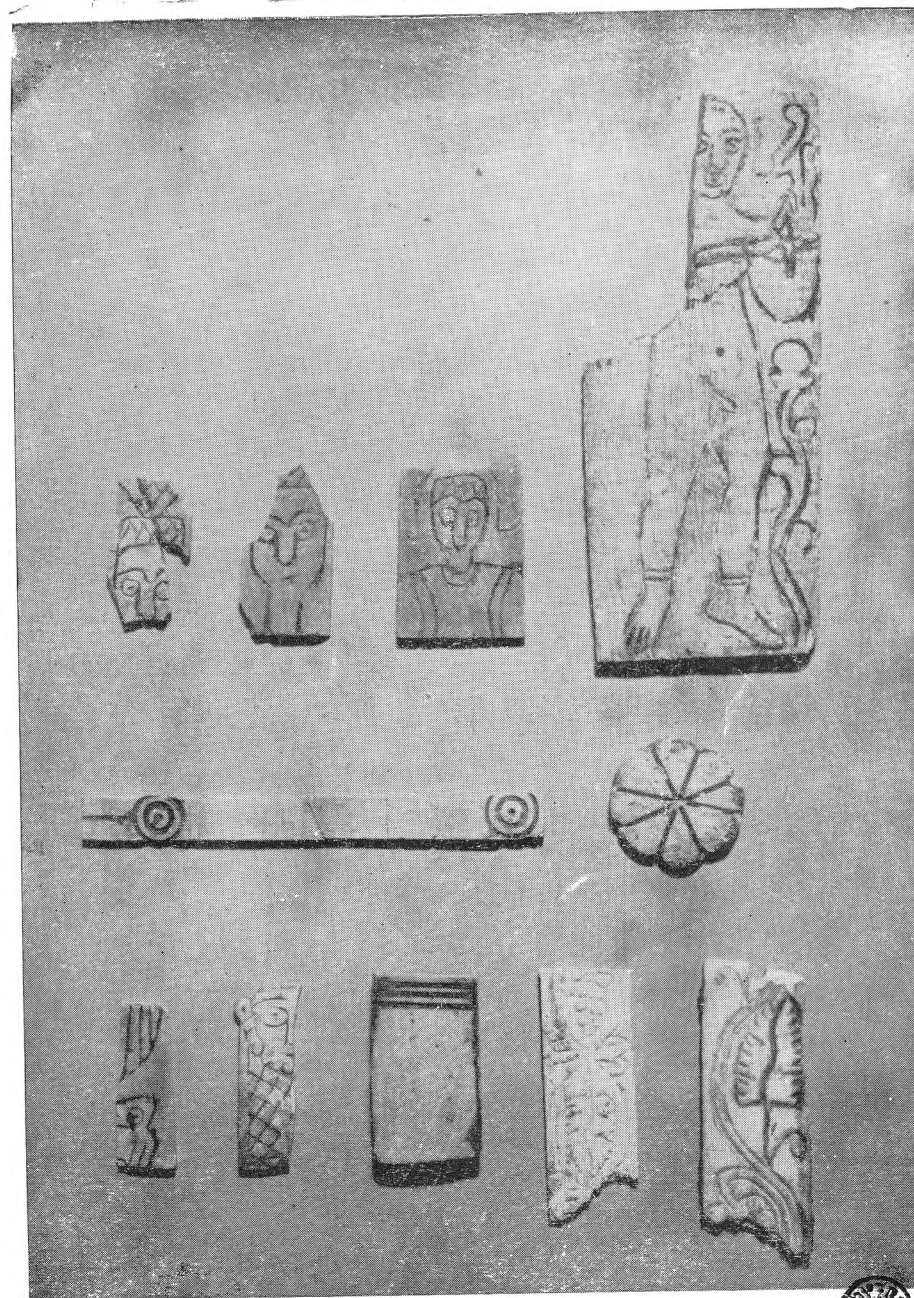


B.– Archer's bracer as placed over the left hand.

Pl. VI



Types of bells



Bone and ivory plaques used for the decoration of caskets.

Pl. IX



A.—Metal vessels.

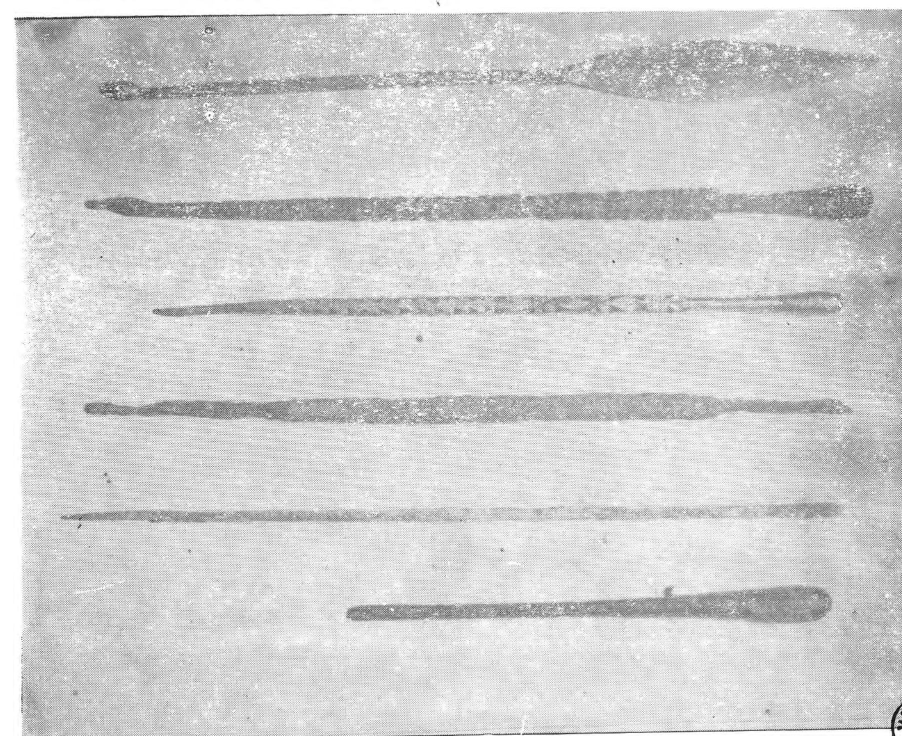


B.— Glass vessels.

Pl. X



A.—Koḥl-pots and ointment vases.

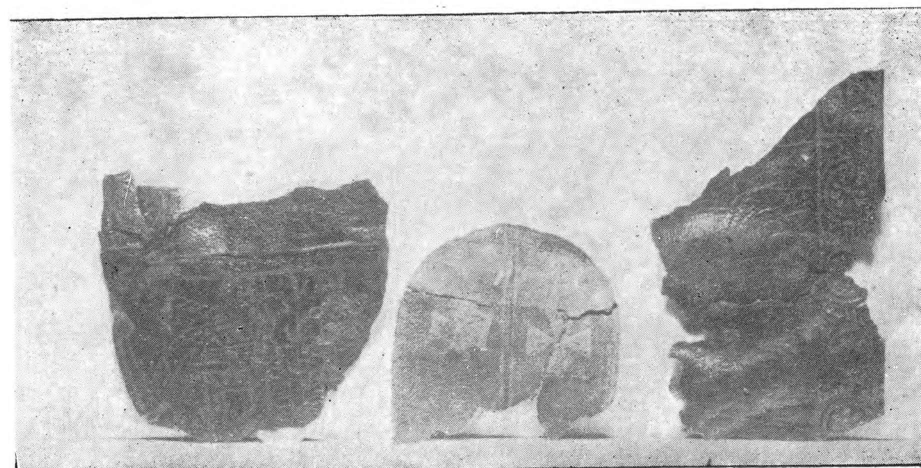




B.—Koḥl-sticks and toilet spoon.

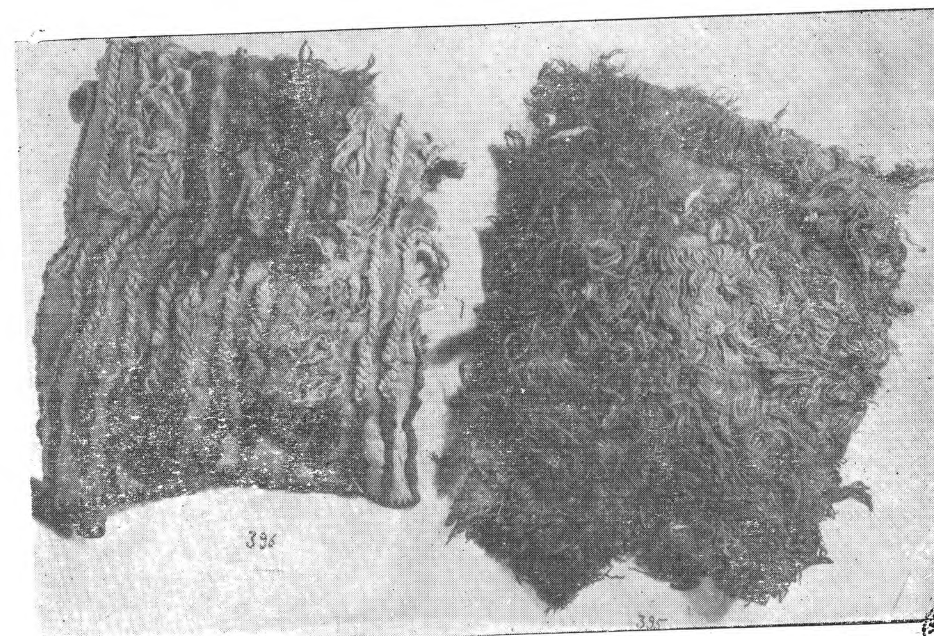


A.—Leather sandals.

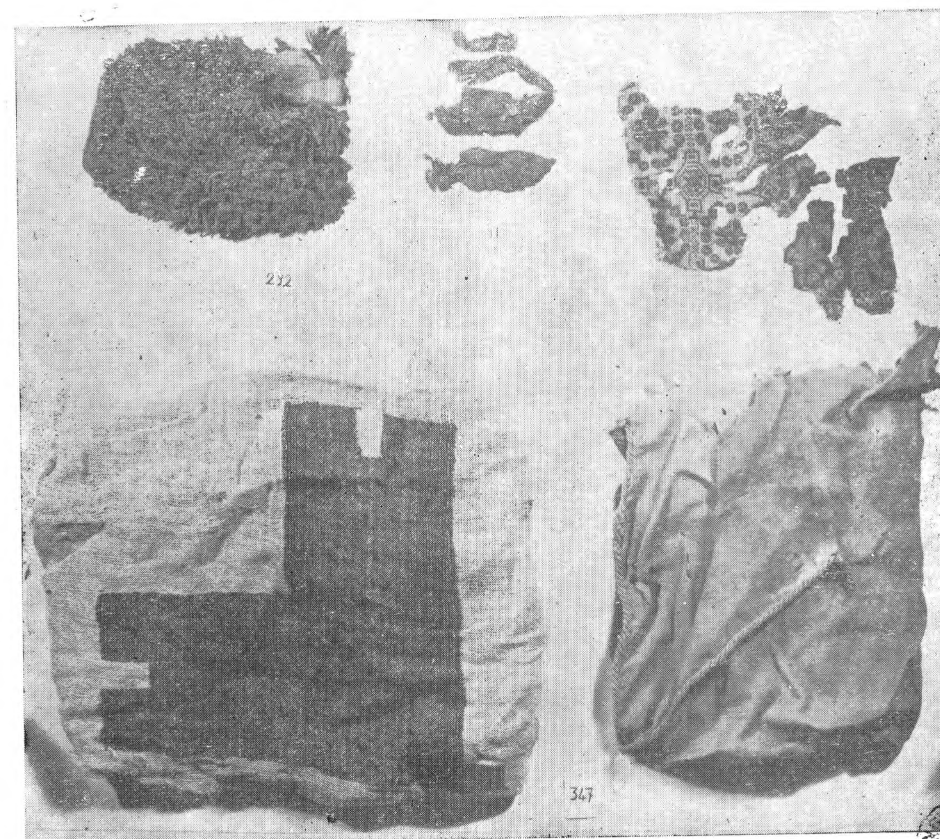




B.—Fragments of decorated leather.



A.—Textiles

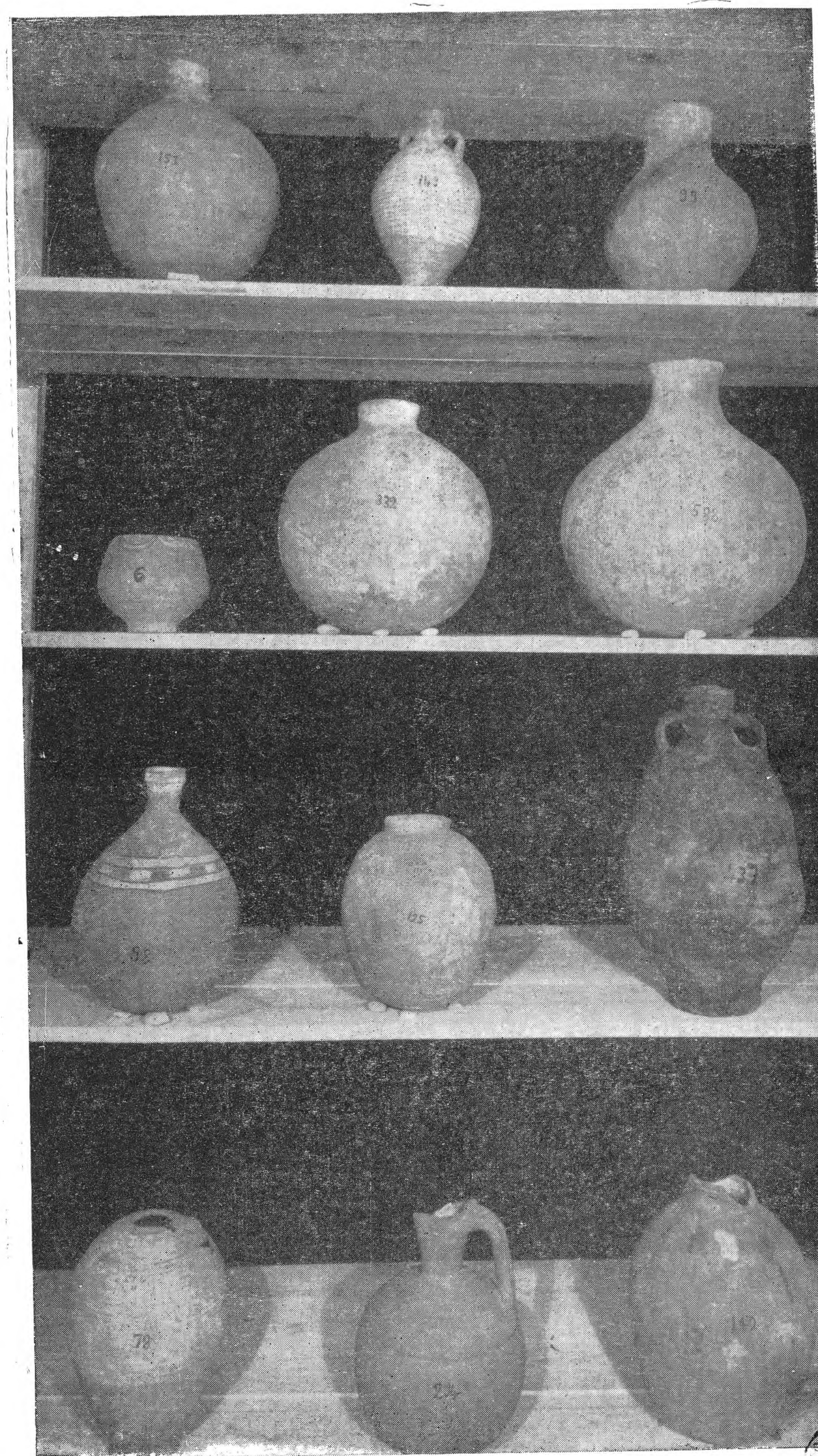


B. – Textiles.





Meroitic offering table.



Specimens of pottery vases.



Male and female figurines of clay.

Pl. XV

ABU MENA

Grabungen von 1961 bis 1969

VON
PETER GROSSMANN

Im Frühjahr 1961 hat nach jahrzehntelanger Unterbrechung die Abteilung Kairo des Deutschen Archäologischen Instituts in Gemeinschaft mit dem Koptischen Museum in Kairo die Grabungen in Abu Mena wieder aufgenommen. M. Krause, P. Labib und H. Stock gaben den entscheidenden Anstoβ dazu, nachdem vor allem F.W. Deichmann (1) und Ward Perkins (2) die Aufmerksamkeit erneut auf die Bedeutung der Menasstadt gelenkt hatten. Beide betonten, daβ eine Klärung der durch die Grabungen C.M. Kaufmanns (3) zu Beginn dieses Jahrhunderts nicht gelösten Fragen nur von einer systematischen Neubearbeitung der einzelnen Monumente erhofft werden kann.

Während der ersten Jahre wurden die neuen Grabungen als Gemeinschaftsunternehmung des Koptischen Museums und des Deutschen Archäologischen Instituts geführt. Nach dem Ausscheiden des ersteren trat im Frühjahr 1964 das Franz Joseph Dölger-Institut (Bonn) an dessen Stelle. Die Arbeiten in Abu Mena enfreuten sich jedoch weiterhin der regen Anteilnahme und freundschaftlichsten Unterstützung des Koptischen Museums.

Bis zu der erneuten Unterbrechung im Juni 1969, die - so hoffen wir - bald aufgehoben wird, konnte alljährlich eine mehrmonatige Grabungskampagne durchgeführt werden. Die Leitung lag zunächst in den Händen von H. Schläger. 1964

---

(1) F. W. Deichmann, AA 1937, 75 ff.

(2) W. Perkins, BSR 17, 1949, 26 ff.

(3) S. besonders C. M. Kaufmann, Berichte über die Ausgrabungen I-III (1906-08) ; ferner ders., die Menasstadt und das Nationalheiligtum der altchristlichen Ägypter Bd. I (Leipzig 1910) ; wie auch ders., die Heilige Stadt der Wüste (Kempten 1924) ; für weitere Literatur s. P. Grossmann, MDIK 26, 1970, 56 Anm. 1.

ging sie auf W. Müller-Wiener über und wird seit 1969 gemeinsam von J. Engemann und P. Grossmann ausgeübt. Beide sind langjährige Mitglieder (Grossmann seit 1964; Engemann seit 1965) des Grabungsteams (1).

Gruftkirche

Die als mittleres Glied der großen dreiteiligen Kirchenanlage zwischen dem Baptisterium und der Großen Basilika gelegene Gruftkirche bildet das bedeutendste und zugleich komplizierteste Gebäude der Stadt (2). 1942 hat W. Perkins durch kleinere Sondagen im Bereich des Sanktuariums eine Reihe von verschiedenen Bauphasen festgestellt (3), von denen die wichtigste, von ihm als Periode IV bezeichnete Phase auch in den heutigen Außenwänden sich in umfangreichen Partien noch nachweisen läßt.

Bisher wurden diese Untersuchungen noch nicht wieder aufgenommen, doch konnte im Zusammenhang mit den Arbeiten in den beiden Anschlußbauten (Baptisterium und Große Basilika) kleinere Schürfungen auch im Bereich der Gruftkirche (4) durchgeführt werden. In Zusammenfassung des bisher vorliegenden Materials ergibt sich für den Grundriß der wohl in den Beginn des 6. Jhs. fallenden Hauptbauphase des Gruftkirche eine in ostwestlicher Richtung leicht gestreckte Vierkonchenanlage, die von einem rechtwinkligen Außenbau

(1) Weitere Mitarbeiter in den bisher durchgeführten Kampagnen waren die Architekten und Archaologen : W. Binsfeld (1965), Lieselotte Breitenbruch (1969), J. Christern (1962), H. Jaritz (1969), M. Krause (1961, 1962), M. Meinecke (1969), F. Traut (1964, 1965, 1966). Von ägyptischer Seite nahmen als Grabungsmitglieder und Inspektoren folgende Herren teil : F. Afifi (1965), A. Basilios (1964), H. Boutros (1961, 1962, 1963, 1964), H. Hegazi (1967, 1968), A. Mekkawi (1966), M. el-Menebawi (1969). Ferner unterstützten uns die Photographen und Zeichner : K. Beck (1966, 1967), Hanna Erdmann (1966), B. Farag (1961, 1965). Eleni Grossmann (1967), Agathe Hommel (1966, 1967, 1968, 1969), D. Johannes (1969), W. Schiele (1963, 1964, 1965), wie auch die Studenten der Archäologie und Architektur : M. Baumstark (1969), A. Bayer (1969), B. Müller (1967), H. von Radetzki (1968), W. Ribka (1963), C. Schneider (1962, 1963), W. Weber (1963). Sonderaufgaben ünbernahmen ferner der Geologe A. Anger (1964) wie auch die Karthographen H. Hillebrand (1962), G. Moder (1962), und P. Wacker (1962). Allen Teilnehmern sei an dieser Stelle nochmals für ihre tatkräftige Mitarbeit gedankt.

(2) Lageplan in Müller-Wiener MDIK 22, 1967, Abb. 1.

(3) W. Perkins, BSR, 17, 1949, 26 ff., s. auch F. W. Deichmann AA 1937, 75 ff.

(4) S. Schläger, MDIK 20, 1965, 123 Abb. 1 Taf. 41 b; Müller-Wiener, ebd. 136 Abb. 3; Grossmann, MDIK 26, 1970, 78 f. Anm. 6 Abb. 10.

umschlossen wird (Pl. VI). Nur am Scheitel beider Querkonchen treten kleine Nebenapsiden aus den sonst geradlinigen Außenwandflächen hervor. Im Innern des Baues werden sämtliche, den Vierpaß umschreibende Stützen aus Säulen gebildet. Lediglich die Form der Piedestale und wohl auch die der Kapitelle wechselt. Das Material dürfte durchweg prokonnesischer Marmor gewesen sein.

In der weiteren baulichen Ausführung ist die Gruftkirche mit dem westlichen Baptisterium und der östlich anschließenden Großen Basilika durch gemeinsame Trennwände unmittelbar verbunden. Mehrere Durchgänge stellen außerdem die gegenseitige Kommunikation nach beiden Seiten her. Große Verbindungsöffnungen scheinen vor allem in den Narthex der Großen Basilika geführt zu haben (1). Leider wird die Verbindung jedoch heute durch den weit nach Osten vorgezogenen Neubau der Gruftkirche unter dem Patriarchen Joseph (833-49) von Alexandria gestört. Unmittelbare Außeneingänge finden sich nur am Westende beider Längswände.

Große Basilika

Die Neubearbeitung der im Osten an die Gruftkirche anschließenden Großen Basilika (Pl. VI) (früher: "Arkadiusbasilika") wurde in den Kampagnen von 1961 bis 1963 unter der Leitung von H. Schläger durchgeführt (2). In ihrer grundrißmäßigen Anlage bildet sie eine mit einem dreischiffigen Querhaus ausgebildete Basilika, die als Pilgerkirche außerordentlich großen Ausmaßes wohl in erster Linie zur Entlastung der Gruftkirche diente. Wie bereits Kaufmann vermutete, war sie über den Seitenschiffen mit Emporen ausgestattet (3).

Durch mehrere an verschiedenen Stellen durchgeführten Sondagen konnten zwei Hauptbauphasen festgestellt werden, von denen die erste wohl in die 2. Hälfte des 5. Jh.s fällt. Offensichtlich ist dieser erste Bau nicht vollendet worden.

(1) s. Grossmann, MDIK 26, 1970, 78 Anm. 6.

(2) Schläger, MDIK 19, 1963, 114 ff.; ders. MDIK 20, 1965, 122 ff.

(3) s. Kaufmann, die Heilige Stadt der Wüste (Kempten 1910) 101 ff. Abb. S. 107

Seine Apsis, von der sich nur die Reste des Fundaments erhalten haben (Pl. 1), lag rund 5,5 m westlich der Apsis des größeren Neubaues, der in den Anfang des 6. Jh. s gehört. Auffälligerweise steht jene ältere Apsis im Zusammenhang mit den Fundamenten der späteren östlichen Querschiffarkaden. Schläger schloß daraus, daß die ältere Kirche nur einschiffig ausgebildet war (1). Aller Wahrscheinlichkeit nach gilt das jedoch nur für das ältere Querhaus, dessen Außenwände in dem späteren Großbau für die Fundamente der Querhausarkaden übernommen wurden.

Der Narthex der Kirche folgt unmittelbar auf den Naos der Gruftkirche. An den Schmalseiten besitzt er je eine als offene, halbkreisförmige Säulenstellung ausgebildete Exedra, die bereits W. Perkins beobachtet hat (2).

Die Reinigungsarbeiten auf der Südseite der Großen Basilika erbrachten eine Vielzahl von kleineren Räumen und Höfen. Im ganzen handelt es sich wohl um weitgehend selbständige Bauanlagen, doch stehen sie verschiedentlich untereinander in Verbindung. Ihre Funktion konnte im einzelnen bisher nicht geklärt werden. Sicher handelt es sich jedoch wenigstens zum Teil um zusätzliche Andachtsräume.

Ein im Osten an den südlichen Querhausarm der Großen Basilika anschließendes Gebäude wurde 1969 von M. Meinecke untersucht (3). Es besaß mindestens zwei Geschosse, war jedoch auffallend leicht gebaut, so daß besonders im Ostteil zahlreiche nachträgliche Verstärkungen angebracht werden mußten. Der Grundriß zerfiel in eine Serie von meist in regelmäßige Dreiergruppen angeordneten Räumen. Wahrscheinlich hat dieser Bau als Magazin, Lager oder Archiv der Großen Basilika gedient.

Sogenanntes Baptisterium

Das dritte Glied der großen zentralen Kirchenanlage bildet das westlich an die Gruftkirche anschließende sogenannte Baptisterium (Pl. VI). Seine Baugeschichte konnte

(1) Schläger, MDIK 19, 1963, 119.

(2) Perkins, BSR 17, 1949, 44 ff. Abb. 3; s. auch Grossmann, MDIK 26, 1970, 78 f. Abb. 10.

(3) M. Meinecke, MDIK 26, 1970, 63 ff. Abb. 4. 5.

unter Leitung des Verfassers in drei Kampagnen von 1664-66 weitgehend geklärt werden (1). Vorläufig unentschieden bleibt jedoch weiterhin die Frage, ob es sich nun tatsächlich um ein Taufhaus handelt oder um ein sakrales Heilbad - wie bereits A.M. Schneider vermutet hat (2).

Das noch heute weitgehend aufrecht stehende Gebäude gehört in seinen wichtigsten Partien dem Anfang des 6. Jhs. an. Der Grundriß zeigt zwei durch Rundnischen und Säulenvorlagen architektonisch betonte Haupträume und mehrere diese auf drei Seiten umgebende Nebenräume. Beide Haupträume, von denen der größere einst mit einer zentralen Kuppel überdeckt war, enthalten je eine in den Boden eingelassene Piscina (Pl. II). Während diese Räume sich damit als eigentliche Träger des kultischen Geschehens ausweisen, übernahmen die übrigen wohl nur die Funktion von Verbindungs-und Aufenthaltsräumen. Der einzige Außeneingang liegt in der Nordostecke. Mehrere Durchgänge verbinden das Baptisterium jedoch mit dem Innern der Gruftkirche.

Der diesem Bau vorausgehende Vorgängerbau der 2. Hälfte des 5. Jh. s ist in der Anlage kleiner, läßt aber in der räumlichen Anordnung auf eine funktionell nahezu gleichartige Benutzung schließen. Auch er besitzt zwei zentral gelegene, etwas größere Haupträume mit je einer Piscina (Pl. II).

Die älteste Anlage an diesem Platz bildet ein größeres mit einer niedrigen Brüstung umgebenes Wasserbecken, dessen Reste unter den Fußböden in der Nordostecke des heutigen Gebäudes zutage traten. Die Bodenfläche in der Umgebung des Beckens war um eine niedrige Stufe gegenüber dem allgemeinen Geländeniveau erhöht und mit einem Kalkmörtelestrich befestigt. Offensichtlich stand diese Beckenanlage mit weiteren Bauwerken nicht mehr in Verbindung.

Die jüngsten Baureste des Baptisteriums bilden schließlich einige sehr massiv ausgeführte Stützmauern auf der Nordseite, die offensichtlich zur Sicherung der Zentralraumkuppel errichtet waren. Generell gehören sie dem 8. bis 9. Jh. an.

(1) s. Müller-Wiener, MDIK 20, 1965, 133 ff. Abb. 3. 4; ders. MDIK 22, 1967, 208 ff.

(2) A. M. Schneider. Bibl. Oriental. 10, 1953, 64.

Doppelbad

Bei den 1964 und 1965 von W. Müller-Wiener durchgeführten Nachgrabungen in dem von Kaufmann als" Bäderbasilika" bezeichneten Ruinenkomplex (1) stellte sich heraus, daß seine bauliche Ausdehnung wesentlich größer ist, als Kaufmann zunächst angenommen hat. Die neuen Ausgrabungen erbrachten zugleich den Nachweis, daß das Gebäude mit einer sakralen Bestimmung nichts zu tun hat. Vielmehr handelt es sich um eine durchaus normale, der körperlichen Reinigung bestimmte Thermenanlage (2).

Der Grundriß des Bades (Pl. VII) bildet ein weitgehend geschlossenes Arrangement von zwei annähernd gleichartigen, aber streng voneinander geschiedenen Abteilungen die sich beide in nordsüdlicher Richtung gegenüberliegen. Aller Wahrscheinlichkeit nach diente diese Unterteilung der Geschlechtertrennung. Beide Abteilungen bestehen aus einer Vielzahl von Einzelräumen, die jeweils einen großen dreischiffigen Hauptraum umschließen (Pl. III). Die Latrinen sind in beiden Fällen an die westliche Außenseite gezogen. Im Bereich des Badehauses greifen beide Abteilungen ineinander. Jeder von ihnen sind vier Einzelräume (Vorraum, Tepidarium I und II, Caldarium). zugedornet. Der Zweck dieserKonzentration bestand wohl in erster Linie in der Vereinfachung der Betriebswartung.

Baulich sind die Baderäume aus gebrannten Ziegeln ausgeführt. An ihren Hypokausten und Resten der Wandtubulierung läßt sie noch deutlich das Beheizungssystem erkennen. Die dazugehörigen Praefurnien wurden von unterirdischen Bedienungsgängen befeuert. Zum Teil haben sich diese in einem guten Zustand erhalten.

Im Westen der Thermenanlage liegen ohne unmittelbare bauliche Verbindung mit dem eigentlichen Hauptbau die Einrichtungen der Wasserversorgung. Das Zentrum bildet ein tiefer Brunnen mit den Resten einer auf der Nordseite angeschlossenen Saqienanlage. Südlich davon liegen mehrere Zisternen.

(1) Kaufmann, erster Bericht 1906, 78 ff.; ders. dritter Bericht 1908, 7 ff.; ders. die Menasstadt und das Nationalheiligtum der altchristlichen Ägypter I (Leipzig 1910) 103 ff.

(2) Müller-Wiener, MDIK 20, 1965, 127 ff. Abb. 1; ders. MDIK 21, 1966, 173 ff. Abb. 1-3; ders. MDIK 22, 1967, 209.

Die Bauten an der Ostseite des Bades schließlich gehören nicht mehr zum Bestand der Thermenanlage. In erster Linie handelt es sich um Verkaufsläden, die entlang der hier in nordsüdlicher Richtung verlaufenden Straße aufgereiht sind.

Diese heute vorliegende Gestalt hat das Doppelbad erst im Laufe von mehreren Umbauten und Erweiterungen erhalten. Zum ältesten bisher nicht genauer im 5. Jh. zu datierenden Bestand gehören die Haupträume der südlichen Badeabteilung. Bereits gegen das Ende des 5. bzw. Anfang des 6. Jhs. wurde der Bau durch Vermehrung der beheizbaren Baderäume und Anfügung von zusätzlichenAufenthaltsräumen auf der Nordseite in ein Doppelbad umgewandelt. Der volle Ausbau fand dann im weiteren Verlauf des 6. Jhs. statt und dürfte bis zum Ende des Jahrhunderts seinen Abschluß gefunden haben.

Sogenannter Palast

Der am Nordrand der Stadt gelegene, in gewisser Hinsicht ebenfalls als Thermenanlage anzusehende Ruinenkomplex konnte in seiner Bestimmung bisher noch nicht eindeutig geklärt werden. Von Kaufmann wurde nur die an der höchsten Stelle des Schutthügels befindliche Wasserversorgungsanlage freigelegt (1). Sie besteht wie beim Doppelbad aus einem tiefen Brunnen und mehreren Zisternen. Die seit 1966 von Müller-Wiener durchgeführten Flächengrabung ist noch nicht abgeschlossen (2). Immerhin läßt der aufgedeckte Bestand bereits eine erhebliche Verwandtschaft zur Anlage des Doppelbades erkennen. Jedoch ist er gegenüber diesem in seiner grundrißmäßigen Ausbildung wesentlich klarer und übersichtlicher. Auch er ist mehrfach umgebaut worden.

Das Zentrum der Anlage bilden wiederum zwei hier jedoch im rechten Winkel zueinander gelegene Großräume oder Höfe, die jeweils auf allen vier Seiten von Säulenstellungen umgeben sind. An den Längsseiten öffnen sie sich zu langgestreckten Korridoren, an den Schmalseiten zu jeweils

(1) Kaufmann, zweiter Bericht 1907, 61 Off.; ders. dritter Bericht 27 Abb. 10.

(2) Müller-Wiener, MDIK 21, 1966, 183 f.; ders. MDIK 22, 1967, 209 ff. Abb. 2; ders. AA 1967, 458 Abb. 1.

als rechtwinklige Exedren ausgebildeten Triklinien. Zu den Außenseiten des Gebäudes nach Norden, Osten und Süden folgen weitere Raumfluchten und Korridore, die an der südlichen Straße mit einer Säulenportikus abschließen. In der inneren von beiden Abteilungen umschlossenen Nordwestecke sind die bisher noch nicht vollständig freigelegten Baderäume untergebracht. Bisher konnte nur der Badetrakt der Nordanlage freigelegt werden. Er enthält - abweichend von dem oben besprochenen Doppelbad - nur drei Räume: Vorraum, Tepidarium und Caldarium (Pl. IV). Die Heizungsanlage bestand wiederum aus Praefurnien und Hypokausten. Erstere wurden von unterirdischen Bedienungsgängen versorgt.

Ob die westlich der Wasserversorgungsanlage aufgedeckten Baureste ebenfalls zum Bestand dieses Baues gehören, ist noch nicht abschließend geklärt. Fest steht jedoch, daß die südliche Straßenportikus auch hier entlangläuft, und damit stehen beide Komplexe wenigstens städtebaulich im Zusammenhang.

Zeitlich ist der endgültige Ausbau der Anlage wohl in den Anfang des 6. Jh. s zu setzen. Jedoch kann ihr Bestand nicht von großer Dauer gewesen sein. Es fehlen alle Hinweise auf größere Reparaturen, wie sie gerade für das Doppelbad charakteristisch sind. Statt dessen ist der Bau nachhaltig von Steinräubern geplündert worden. Zu einem Zeitpunkt, als der Bau schon nicht mehr benutzt wurde, hat sich eine Töpferwerkstatt in den Westteil eingenistet (1). Nach den Keramikfunden ist diese in die 2. Hälfte des 7. Jhs. zu datieren.

Nordbasilika

Die Nordbasilika wurde schon von Kaufmann (2) vollständig freigelegt. Ihre im Jahre 1969 von H. Jaritz begonnene Neubearbeitung mußte sich daher auf eine gründliche Reinigung und sorgfältige Verzeichnung von allen noch in situ

(1) Müller-Wiener, AA 1967, 460 ff. Abb. 2.

(2) Kaufmann, zweiter Bericht (1906) 98 ff. Abb. 42; ders., die Heilige Stadt der Wüste (Kempten 1910) 173 ff. Abb. S. 170.

befindlichen Einzelheiten beschränken (1). Bisher konnte diese Arbeit nur im Bereich der eigentlichen Kirche und den an beiden Längsseiten angrenzenden Nebenbauten zum Abschluß gebracht werden.

Nach dem bisher vorliegenden Ergebnis zerfällt der seit Kaufmann bekannte, außerordentlich übersichtlich angelegte Grundriß (2) der Gesamtanlage in mehrere zeitlich voneinander unabhängig aufgeführte Einzelabschnitte. Unter diesen bildet die Kirche selbst das älteste Gebäude, das - wie die Untersuchung eindeutig erwies - ursprünglich frei gestanden hat. Der Grundriß folgt dem einer normalen ägyptischen Kirche mit einem an drei Seiten umlaufenden Seitentrakt und dreiteiligen Sanktuarium. Die heute fehlenden Säulen scheinen aus Marmor gewesen zu sein. Vor der Apsis fanden sich noch Spuren für den Standort des Altars, sowie Reste der Presbyteriumsschranken. Der bereits dem Ursprungsbau angehörende Aufgang in das Emporengeschoß ist nach Süden aus dem Baukörper herausgezogen.

Alle übrigen Bestandteile der Kirche sind erst im Zuge späterer Erweiterung hinzugekommen. Dazu gehören das westliche Atrium mit einer vielleicht gleichzeitig auf der Südseite angegliederten Folge von Typenräumen. Letztere legen die Deutung der Anlage als Kloster nahe. Bei den auf der gegenüberliegenden Nordseite des Atriums anschließenden Bauresten scheint es sich wenigstens teilweise um Wirtschaftsräume zu handeln. In Höhe der Kirche selbst liegen auf der Südseite ein Baptisterium und ein zusätzlicher Andachtsraum. Räumlich von geringerer Ausdehnung ist der Anbau auf der gegenüberliegenden Nordseite, der selbst in zwei weitere zeitlich sogar unabhängig voneinander errichtete Einzelabschnitte zerfällt. Ihre Bestimmung ist noch unklar.

In der technischen Ausführung gleicht das Kloster durchaus den übrigen Bauten des 5. und 6. Jhs. in Abu Mena. Aller Wahrscheinlichkeit nach ist es auch in dieser Zeit entstanden.

(1) H. Jaritz, MDIK 26, 1970, 69 ff. Abb. 6-8.

(2) Neben den von Kaufmann publizierten Plänen ist der Grundriß abgedruckt auch in U. Monneret de Villard, Atti 4. Congr. Int. di Arch. Crist. I (Rom 1940) 292 Abb. 2; A. Badawy in Kyrilliana (Kairo 1947) 346 ff. Abb. 5; ders. Guide de l'Egypte Chrétienne (Kairo 1953) 40 f. Abb. 16.

Ostkirche

Anläßlich der Untersuchung von einigen Bauresten in den östlichen Randgebieten von Abu Mena gelang 1969 die Entdeckung einer neuen von uns als "Ostkirche" bezeichneten Kirchenanlage ([1]). Durch den Aushub von drei Suchschnitten konnte sie noch im gleichen Jahr vorläufig geklärt werden.

In ihrer typenmäßigen Zugehörigkeit bildet die Kirche ein in Ägypten bisher nur vereinzelt nachgewiesenes Beispiel einer Vierkonchenanlage (Pl. VIII). Das Zentrum besteht aus einem quadratischen, durch Kreuzpfeiler an den Ecken bestimmten Mittelraum, von dem nach allen vier Seiten große, halbkreisförmige Konchen ausgehen. Jeder Konche ist außerdem eine konzentrisch zur Außenwand verlaufende, offene Säulenexedra einbeschrieben. Die Räume in den verbleibenden Zwickeln sind eigentümlicherweise nach außen spitzwinklig ausgebildet, was wohl den Sinn hat, die Rundung der Konchen nach außen zu verstärken. Der westlichen Eingangsseite der Kirche liegt ein Atrium vor (Pl. V).

Leider reichte die Zeit nicht aus, den Bau vollständig freizulegen. Ein Piedestal einer Säule fand sich bisher nur im Atrium. Hier ist auch der aus Sandsteinplatten bestehende Fußboden noch weitgehend intakt. In der Kirche selbst haben sich dagegen in dem bisher freigelegten Bereich noch keine originalen Bestandteile des Fußbodens wie auch der Säulenstellung gefunden. Wahrscheinlich bestanden diese aus Marmor und sind ausgeraubt worden.

Auch dieser Bau stimmt in der technischen Ausführung mit den übrigen Bauten der Menasstadt weitgehend überein. Er setzt jedoch in seiner Anlage den Bestand der Gruftkirche bereits voraus. Demzufolge ist er etwa in die Mitte des 6. Jhs. zu datieren.

([1]) Grossmann, MDIK 26, 1970, 76 ff. Abb. 9.

Kirche im Karm al-Aḥbariya

Ein in östlicher Richtung etwa 7,5 km von Abu Mena entfernt gelegener Kirchenbau bildet die kleine Kirche im Karm al-Aḥbariya. Sie wurde 1966 von Müller-Wiener entdeckt und in den folgenden Jahren von ihm und J. Engemann vollständing ausgegraben ([1]). Leider ist sie in den Jahren vor ihrer Entdeckung von Steinräubern stark geplündert worden, so daß sich von ihrer ehemaligen Bemalung nur noch mehr oder weniger große Bruchstücke erhalten haben. Immerhin ließen sich einige wenige Stücke noch einigermaßen sicher zusammensetzen. Hervorzuheben ist die Darstellung eines Heiligen von dem sich 2 Teilabschnitte auf 2 verschiedenen, lose im Schutt liegenden Quaderblöcken erhalten haben ([1]).

In der baulichen Anlage zeigt die dreischiffige, im wesentlichen aus Trockenziegeln erbaute Kirche eine für den ägyptischen Kirchenbau typische Gliederung des Naos mit westlichem Quertrakt. Davor lagert ein offenbar später angefügter Narthex, der selbst in noch jüngerer Zeit mit einem Baptisterium nach Norden erweitert wurde. Abweichend von der Mehrzahl der frühchristlichen Bauten Ägyptens besteht das Sanktuarium dagegen nur aus einer mittleren Halbkreisapsis ohne Nebenräume.

Kairo Peter Grossmann

([1]) Müller-Wiener, MDIK 22, 1967, 223 f. Abb. 6 ; ders. AA 1967, 473 ff. Abb. 11-15; Grossmann MDIK 26, 1970, 75.

([2]) Mülles-Wiener, AA 1967, 473 ff. Abb. 15.

Taf.	I	Große Basilika,	Sanktuarium mit Fundament der älteren Apsis (Neg. DAI Kairo: 376)
	II	Sogenanntes Baptisterium,	ältere und jungere Piscina im Kuppelsaal (Neg. DAI Kairo : F 1522 A).
	III	Doppelbad,	Hauptsaal der Südabteilung (Neg. DAI Kairo : 2202).
	IV	Sogenannter Palast,	beheizbare Baderäume (Neg. DAI Kairo : 700).
	V	Ostkirche,	Schnitt durch das Atrium (Neg. DAI Kairo :).

VI Abu Mena, dreiteilige Hauptkirchenanlage, Zustand des 6 Jh.s (schraffiert : ältere Fundamente ; punktiert : aufrecht stehender Bestand des 5. Jh.s ; schraffierte Säulen : Piedestale in situ).

VII Abu Mena, Doppelbad (schwarz : Bestand des 5. Jh.s; eng schraffiert : Anfang 6. Jh.s ; weit schraffiert : Ausbau bis zum Ende des 6. Jh.s).

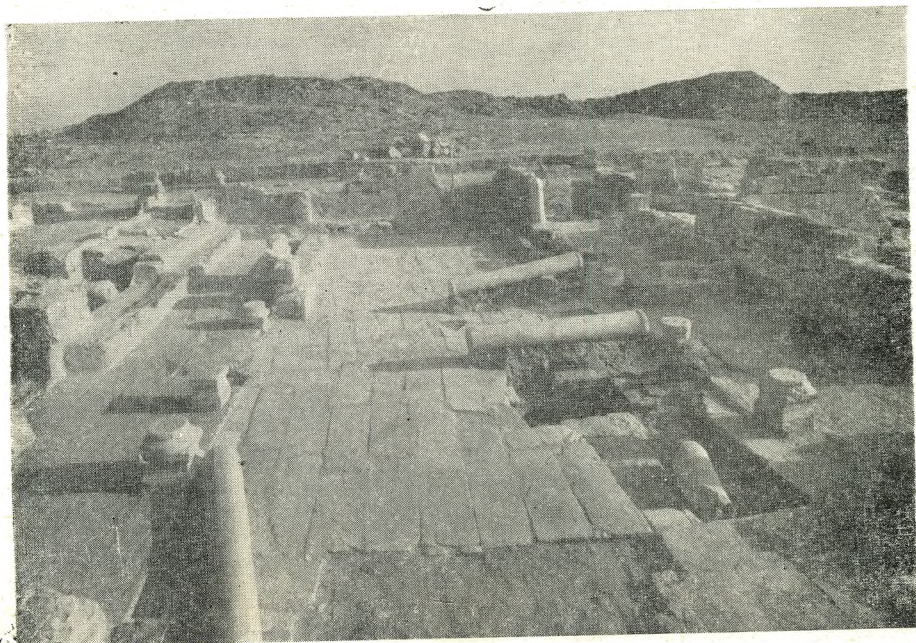
VIII Abu Mena, Ostkirche.



Taf. 1 Große Basilika



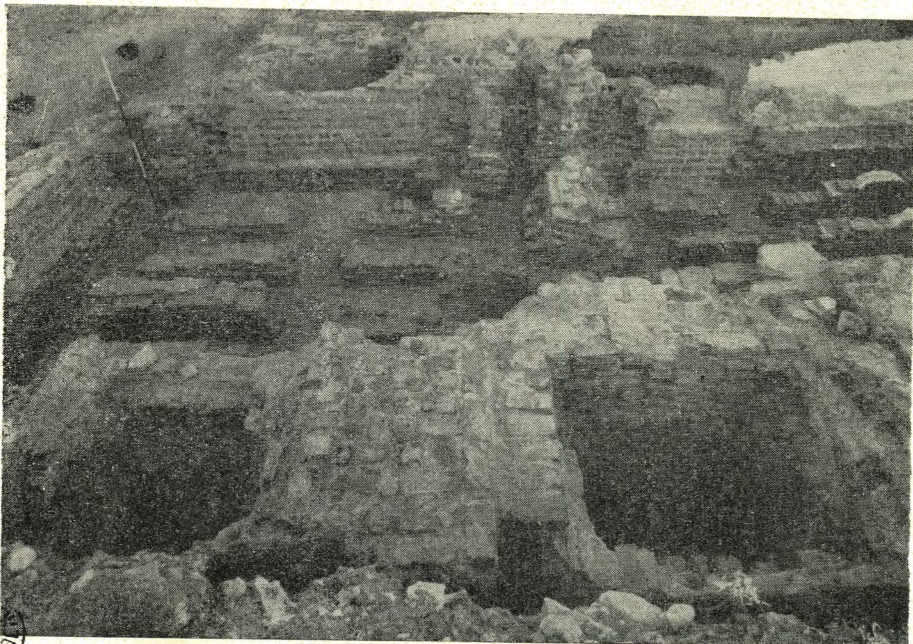
Taf. 2 Sogenanntes Baptisterium





Taf. 3 Doppelbad

Pl. III



Taf. 4 Sogenannter Palast

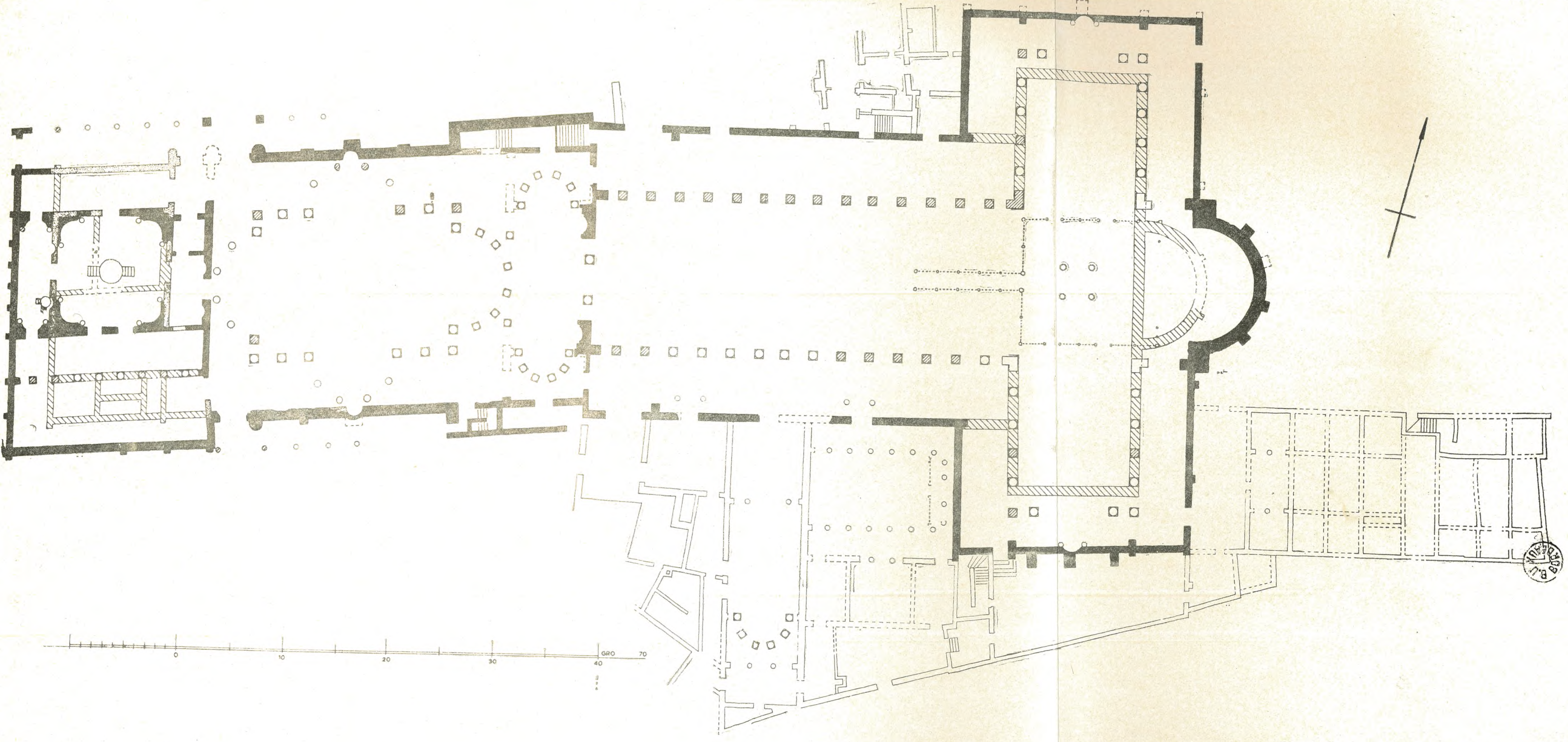
Pl. IV

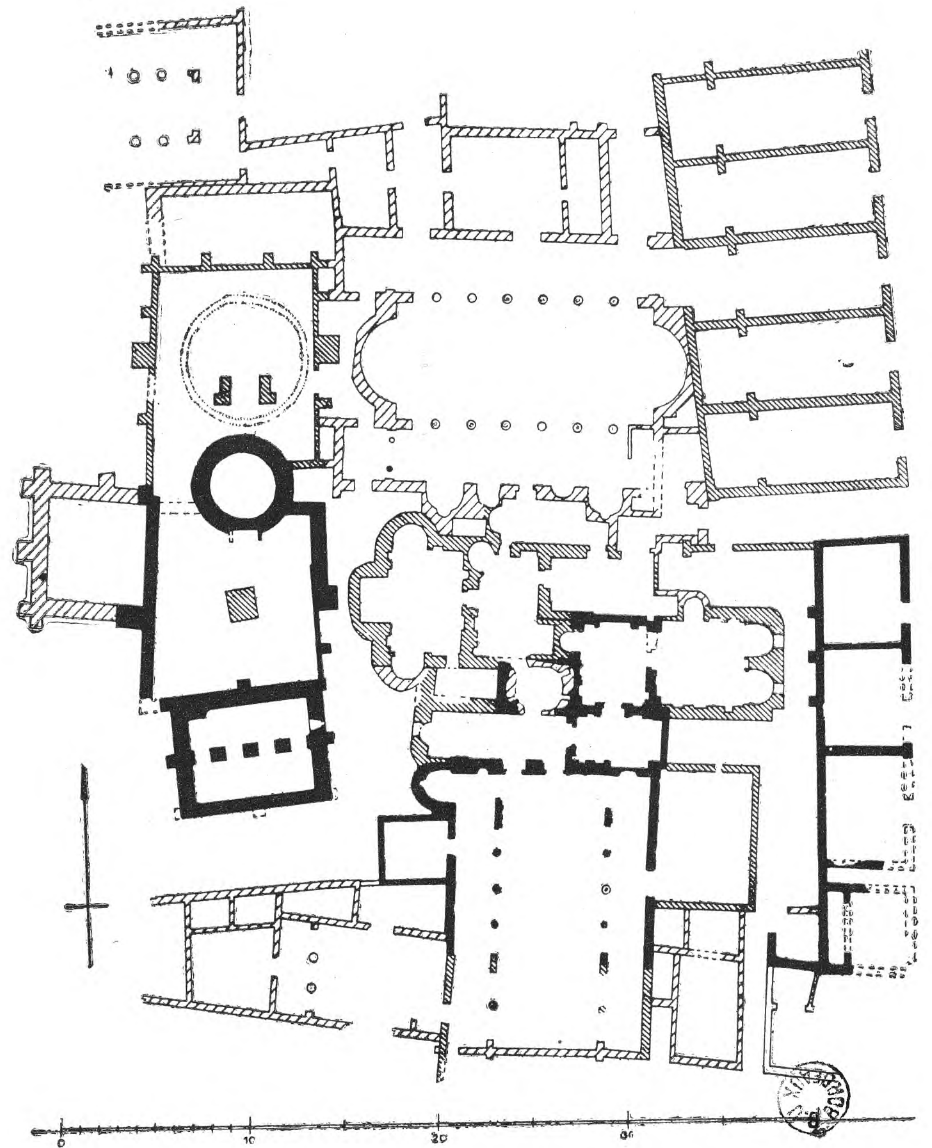


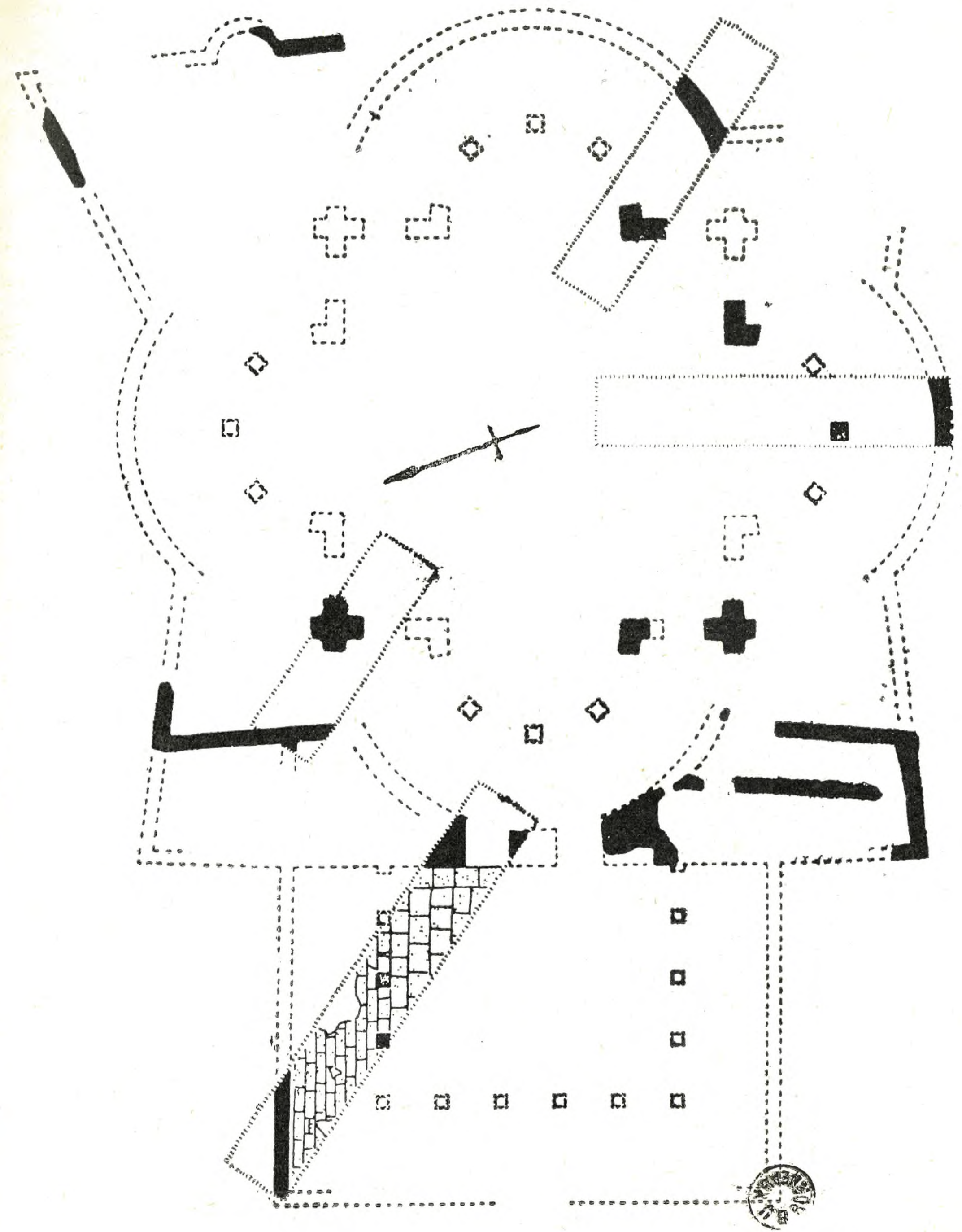


Taf. 5 Ostkirche

Pl. VI




0
10
20
30



VORLÄUFIGER BERICHT ÜBER NEUE REINIGUNGSARBEITEN IM JEREMIASKLOSTER VON SAQQARA

VON

PETER GROSSMANN

Zur Durchführung von Kontrolluntersuchungen in den vom Wüstensand seit längerer Zeit wieder zugedeckten Kirchenbauten des Jeremiasklosters von Saqqara war von der Abteilung Kairo des Deutschen Archäologischen Instituts mit einer erneuten Freilegung der Bauten begonnen worden. Die Arbeit dauerte vom 22. April 1970 bis zum 26. Mai. Teilnehmer waren außer dem Verfasser Herr Dieter Johannes als Photograph und Frau Eleni Grossmann als Zeichnerin. Vom Service des Antiquités war Herr Abdelkrim A. Moubarak entsandt worden. Schließlich waren unter Rais Khamil Radiq 4 Arbeiter aus Quft und 25 ortsansässige Arbeiter tätig. Allen Teilnehmern sei für ihre tatkräftige Mitarbeit nochmals gedankt.

Als erstes Objekt war die größte von Quibell als "Main Church" bezeichnete Kirche ausersehen worden (1). Sie konnte auf fast ihrer gesamten Ausdehnung von den sie bedeckenden Sandmassen befreit werden. Zahlreiche Bauskulpturfragmente, die Quibell nach Abschluß seiner Grabungen am Ort belassen hatte, wurden nach Typen geordnet und am Südrande des Grabungsgebietes zusammengestellt.

Im großen und ganzen bestätigten sich die Beobachtungen von Quibell. Die Kirche besitzt einen westlichen Narthex, der mit dem Naos durch eine breite, dreiteilige Öffnung in Verbindung steht. Weitere, unmittelbar in das

---

(1) J. E. Quibell, Excav. at Saqqara 1907-08 (Kairo 1909) 2 ff. Taf. 1-5 ; ders. Excav. at Saqqara 1908-10 (Kairo 1912) Taf. 1 ; weitere Literatur : J. P. Kirsch, RQu 25, 1911, 49-51 ; U. Monneret de Villard, 4. Congr. Int. Arch. Crist. 1938 (Rom 1940) 1 292 Nr. 5 ; A. Badawy, Guide de l'Egypte Chrétienne (Kairo 1953) 44 f. Abb. 18 ; A.Grabar, l'Age d'Or de Justinien (1966) Abb. 416 ; P. du Bourguet, Die Kopten (Baden-Baden 1967) 112 f. Abb. 36.

Innere der Kirche führende Eingänge liegen auf beiden Längsseiten ([1]). In Übereinstimmung mit dem in Ägypten allgemein üblichen Schema ist das Mittelschiff von dreiseitig umlaufenden Seitentrakten umgeben. Unregelmäßigkeiten in der südlichen und westlichen Säulenreihe sind auf eine spätere wohl als Sicherungsmaßnahme zu verstehende Verdichtung der Stützenstellung zurückzuführen. Den originalen Säulen entsprechen schmale innere Lisenenvorlagen an den Außenwänden ([2]).

Etwas komplizierter sind die Zusammenhänge im Bereich des Sanktuariums, wo sich nur die Fundamente erhalten haben. Quibell glaubte' hier zwei Bauphasen unterscheiden zu können ([3]). Während er die Fundamente einem älteren Bau des 6. Jh.s zuschrieb, sollen alle darüberliegenden Mauerpartien zu einem um die Tiefe der Apsis verkürzten Neubau des späten 7. Jh.s gehören. Die älteren Säulen sah er als wiederverwendete Stücke des Erstbaues an.

Gegenüber diesen Vermutungen gaben die neuen Untersuchungen Anlaß zu einer wesentlich davon abweichenden Befundinterpretation. Zwischen den Fundamenten der Apsis und ihrer Nebenräume fanden sich Reste eines kleinen älteren Baues, Bau I, den Quibell übersehen hat. Vielleicht ist er am Ende des 5. oder am Anfang des 6. Jh.s erbaut worden. Die Sanktuariumsfundamente der größeren Kirche, Bau II, die Quibell mit Recht in die erste Hälfte des 6. Jh. s datiert, stehen mit denen des übrigen Baues in einem ungestörten Verband. Zwischen ihnen und den aufgehenden Wänden fehlen alle Hinweise auf eine bauliche Trennung. Reste von zwei vorderen Querwänden, die zur Abtrennung von zwei zusätzlichen Sanktuariumsräumen dienen, sind zwar erst später fundamentiert worden, nehmen aber auf die anschließenden Außenwände eindeutig bezug. Damit kann es sich auch bei ihnen höchstens um eine während des

([1]) Der von Quibell genannte Eingang in der Nordwestecke, wurde von uns noch nicht wieder freigelegt, s. Quibell, Excav. at Saqqara 1907-08, 2 Taf. 1.

([2]) Für weitere Einzelheiten vgl. unseren demnächst in den MDIK 27, 1971 erscheinenden Vorbericht.

([3]) Quibell, Excav. at Saqqara 1907-08, 5; ebd. 1908-10, I.

Baues eingetretene Planänderung handeln. Sehr fragwürdig ist ferner das von Quibell als jüngere Apsis angesehene Mauerrund im vorderen Teil des Sanktuariums. Es war derart schlecht fundamentiert, daß es in keinem Verhältnis zu den übrigen von ihm dem Neubau zugeschriebenen Bauteilen steht. Schließlich lassen Teile eines älteren Plattenbodens erkennen, daß das Niveau der älteren Kirche mit dem des heutigen fast schon die gleiche Höhe besaß. Damit muß aber der Gedanke an einen über den Ruinen der älteren Kirche errichteten Neubau aus dem Ende des 7. Jh.s fallen gelassen werden. In seinem wesentlichen Bestand gehört der heutige Bau eindeutig noch der 1. Hälfte des 6. Jh .s an.

Kairo PETER GROSSMANN



Taf. 1. Hauptkirche des Jeremiasklosters von Saqqara.

Pl. I

EINE STUDIENREISE NACH DAIR ABŪ ḤINNIS

VON

PETER GROSSMANN

Im Sommer 1968 hatte ich Gelegenheit zu einem mehrere Tage umfassenden Besuch in Dair Abū Ḥinnis und dem nach Norden anschließenden Ruinengebiet von al-Madīna. Für die vielseitige Hilfe, die mir auf dieser Reise sowohl vom Service des Antiquités wie auch von Seiten der Bewohner von Dair Abū Ḥinnis zuteil wurde, sage ich an dieser Stelle noch einmal meinen aufrichtigen Dank.

Kirche von Dair Abū Ḥinnis

Die alte, bereits von Somers Clark (1) beschrieben Klosterkirche von Dair Abū Ḥinnis wird noch heute von der koptischen Bevölkerung des Ortes für den sonntäglichen Gottesdienst benutzt. Wahrscheinlich entstammt sie der Mitte des 6. Jhs. Gegenüber dem originalen Zustand wird das Innere der Kirche heute durch zwei im Mittelalter eingefügte Querwände räumlich stark verunklärt (2). Zeugen von weiteren Umbauten finden sich im Bereich des Sanktuariums, wo der nördliche Apsisnebenraum und ein Teil des Naos durch Abbruch der Außenwand nach Norden erweitert wurden. Im vorderen Teil liegt jenseits der Nordwand ein ebenfalls erst später angefügtes, vom Innern der Kirche zugängliches Baptisterium. Zum originalen Bestand der Kirche gehören die Südhälfte des Narthex, die in großen Zügen auf beiden Seiten noch vorhandenen Außenwände des Naos sowie die Apsis mit dem südlichen Apsisnebenraum.

Bereits von Somers Clark sind die mittelalterlichen Umbauten der Kirche richtig erkannt und gedeutet worden[3].

(1) Somers Clark, Christian Antiquities in the Nile Valley (Oxford 1912) 181 ff. Taf. 53-56. Eine ältere, seit Somers Clark überholte Aufnahme bildet der Plan von A. Gordon, abgedruckt in A. J. Butler, Ancient Coptic Churches of Egypt (Oxford 1884) Bd. 1 Abb. 29.

(2) s. Somers Clark, Chr. Ant. Taf. 54.

(3) Somers Clark, Chr. Ant. 181 ff. Taf. 55.

Nicht zuzustimmen vermag ich dagegen seiner Rekonstruktion der ursprünglichen Kirche, in der er ihr einen dreischiffigen Grundriß verleiht (1). Für die beiden von ihm angenommenen Säulenreihen bestehen weder Hinweise am Bau noch ist ein Anlaß denkbar, der sie notwendig machen würde. In ihrer ursprünglichen Gestalt ist die Kirche nur einschiffig gewesen. Deutlich korrespondiert mit einem einschiffigen Grundriß auch die Gliederung des Sanktuariums, bei dem die mittlere Apsis räumlich in ungewöhnlichem Umfang auf Kosten der beiden Nebenräume betont ist. Der Sinn davon besteht darin, die Größe der Apsisöffnung an die Breitenausdehnung des Naos anzupassen. Notwendig und zweckmäßig ist das jedoch nur dann, wenn der Apsis nicht nur das Mittelschiff sondern die volle Breite des Naos gegenübersteht.

In gleicher Weise scheint auch der merkwürdig asymmetrische Narthex ursprünglich regelmäßig ausgebildet gewesen zu sein. Auffällig ist in diesem Zusammenhang vor allem der durch die innere nördliche Querwand teilweise verdeckte Pilaster vor der Ostwand, was in der derzeitigen Ausführung keinen rechten Sinn ergibt. Vielleicht gehört er zu einer zweiten hier ehemals befindlichen Ostwandnische[2].

Ober-Ansinā

Bei dem sich im Norden von Dair Abū Ḥinnis ausbreitenden Ruinenfeld, das bei der einheimischen Bevölkerung den Namen "al-Madīna" trägt, handelt es sich aller Wahrscheinlichkeit nach um den in spätantiken und frühmittelalterlichen Papyri vielfach erwähnten Vorort von Antinoupolis: Ober-Anṣinā (3). Archäologisch ist es fast unerforscht.

Somers Clark hat hier drei wohl noch der frühchristlichen Zeit entstammende Kirchenanlagen entdeckt. Bemerkenswert ist vor allem ein größerer Trockenziegelbau, dessen

(1) Somers Clark, a O. Taf. 56; abgedruckt auch in U. Monneret de Villard, Atti 4. Congr. Int. Arch. Crist. (Rom 1940) I 292 Abb. 4; A. Badawy in Kyrilliana (Kairo 1947) 369 ff. Abb. 12; ders. Guide de l'Egypte Chrétienne (Kairo 1953) 64 f. Abb 26; P. du Bourguet, Die Kopten (Baden-Baden 1967) 111 Abb. 33.

(2) Für weitere Einzelheiten vgl. unseren demnächst erscheinenden Bericht in den MDIK 27, 1971.

(3) A. Grohmann, Denkschr Wien 77, 2 (1959) 44; sonst P. Grossmann, MDIK 24, 1969, 144 ff.

Sanktuarium als Trikonchos ausgebildet ist (1). Er beweist, daß diese vornehmste Form der frühchristlichen ägyptischen Kirchenbaukunst auch ihre Vertreter in den einfachen Landkirchen besaß. Leider hat sich in dem über dem Boden sichtbaren Bestand nur das Sanktuarium erhalten. Die Türen scheinen eine mit dem Roten Kloster von Sohāg übereinstimmende Anordnung besessen zu haben (2).

Weit im Norden der Siedlung finden sich die Reste einer von mir als "Nordkirche" bezeichneten Kirchenruine (3). Auch sie ist aus Trockenziegeln erbaut. In der Ostwand der Apsis ist eine breite, bei anderen ägyptischen Bauten sonst nicht belegte Fensteröffnung enthalten.

Weitere Kirchenbauten bilden eine kleine von U. Monneret de Villard publizierte Kirche (4) mit etwa quadratischem Grundriß, sowie die Reste eines dem Typ des Diagonalnischenbaues nahestehenden Oktogons südlich des Trikonchosbaues (5). Es ist nicht ausgeschlossen, daß es sich hierbei um ein Baptisterium gehandelt hat.

Neben diesen kirchlichen Bauresten enthält das Gebiet noch zahlreiche Bauanlagen einer vornehmlich profanen Bestimmung. Beachtung verdient vor allem eine Anzahl von größeren Saalbauten, die mit mehrschichtigen Gewölben überdeckt sind. Teilweise haben sich diese noch bis zu einer beträchtlichen Höhe erhalten.

Kairo PETER GROSSMANN

(1) Somers Clark, Chr. Ant. 187 Abb. 42; ferner Grossmann, MDIK 24, 1969, 153 ff. Abb. 2.

(2) Zur Kirche vgl. U. Monneret de Villard, les Couvents près de Sohâg I-II (Mailand 1925/26); sowie H. G. Evers - R. Romero in K. Wessel, Christentum am Nil (Recklinghausen 1964) 175 ff., mit einer allerdings verfehlten hypäthralen Rekonstruktion des Mittelschiffs.

(3) Bei Somers Clark, Chr. Ant 188 Abb. 42, "Bau C"; ferner Grossmann, MDIK 24, 1969, 150 ff. Abb 1.

(4) U. Monneret de Villard, les Couvents près de Sohâg II (Mailand 1926) 72 Abb. 144.

(5) Grossmann, MDIK 24, 1969, 160 ff. Abb. 4.

BEES IN THE TEMPLE OF DANDARA AND THEIR CONTROL*

BY

ZAKY ISKANDER

In a previous article, the author discussed the control of bees in the Temple of Edfu[1], where the reliefs on its external walls had been badly concealed by thick deposits of clay nests of bees. It is strange that the same bees attacked also, and perhaps at the same time, the Temple of Dandara, in the same manner and nearly to the same extent, although the latter temple is about 180 kilometres to the north of the Temple of Edfu. No other temples in Egypt were attacked by bees in the same way, except that a few scattered clay nests of such bees were formed on some parts of the walls of the temples of Ramesseum, Madinet Habu and Karnak, and Ramesses II at Abydos.

The attack on the two temples so similarly by bees may perhaps be attributed to the fact that the reliefs on the walls of the two temples are equally deep, and it was noticed that the bees preferred always to build their clay nests in the deep lines of the reliefs.

Deposits caused by Bees on the Walls of the Temple:

The very beautiful reliefs on the outer walls of most of the buildings of the temple, specially those on the east and west walls of the temple of Hathor, the East Gate and the temple of Isis were mostly concealed by thick deposits of clay nests of certain kinds of bees which lived in the temple

(1) Z. Iskandar, "Bees in the Temple of Edfu and their Control", *A.S.A.*, T. LVIII (1964), pp. 187-196 and Pls. I—XVII.

* The author is greatly indebted to the Entomological Department, Ministry of Agriculture, for providing the two water pumps. Many thanks are also due to Mr. Wahib Ebeid and Dr. Mahmoud Aassem of the Entomological Department for their cooperation, as well as to Mr. Abd El-Latif Erfan, Mr. Abd El-Moneim Alkhodeiry El-Shandawili and Mr. Sami Nagib for looking after the execution of the work during the hot summer season of 1957.

for some hundreds of years. These deposits are shown on many of the photos taken by Chassinat[1] before 1934 (see Pl. 1). Besides concealing these beautiful reliefs, the bees were also causing much nuisance to the visitors of the temple.

It was, therefore, necessary to control the bees living in this temple, and remove their deposits in order to show again its reliefs.

Since the same problem was met with before in the temple of Edfu, and the Department of Antiquities, in cooperation with the Entomological Department, Ministry of Agriculture, succeeded in solving it, the Chemical Laboratory of the Department of Antiquities, Cairo, managed in 1957 to control the bees in the temple of Dandara in the same way. The execution of the work, however, was not easy for the following reasons:

1. The total area covered by the deposits on the walls of the buildings of the temple exceeded 4500 m^2.

2. The deposits on some parts of the walls were very thick; thus on the upper parts of the east and west walls of the temple of Hathor (Pls. V and IX, as well as on the East Gate (Pl. II), their thickness ranged between 55 and 20 cms.

3. On the lower parts of most of the walls the thickness of the deposits was comparatively much less (Pl. III), but the nests contained much honey that made them viscous and difficult to remove.

4. Many clay nests were found scattered everywhere in the temple, specially on the highest parts of the walls and columns of the façade and the southern wall of the temple of Hathor, on the walls of the Mammise of Augustus and on the outer and inner walls of the small Birth House of Nectanebo 1.

5. In most of the above cases, the bees had built their nests in the deep lines of the reliefs (Pl. IV), as well as in the cracks which happened to exist in the sandstone blocks of the temple.

(1) Emile Chassinat, Le Temple de Dendera, le Caire, Institut français d'archeologie orientale, 1934, Tomes I-V.

6. Numerous nests were built on the mud-brick enclosure wall. These had also to be removed lest the larvae found in them would develop into adults, which would, in turn, build their clay nests on the walls of the temple itself.

Studies on the Problem:

Analogous to what was successfully followed for the control of bees in the temple of Edfu, scientific studies were also made in the temple of Dandara to find out the most satisfactory procedure for controlling the bees in this temple, removing all the deposits and preventing the bees from re-attacking the temple. These studies included:

I. —Chemical analysis of the deposits.

II. —The seasonal activity of the insect.

I.—CHEMICAL ANALYSIS

The deposits of clay nests on the walls of the temple varied in composition and appearance according to their age.

The old deposits were yellowish grey, rather friable and contained very few holes in which no visible remains of the insect or its excretions could be detected. Chemical analysis of these deposits showed that they were mainly composed of sand and clay, and contained very small traces of sodium chloride and sulphate.

The comparatively newer deposits which the bees built in the last few years before 1957 were compact, slightly darker grey and contained many honey comb holes in which a few remains of old insects and their dry excretions could be observed.

The newly formed nests which the bees built in 1957 were roughly oval or circular light grey convex structures. Each nest contained six compartments or cells, in each of which there was a yellowish white fat, living larva, surrounded with much honey-like excretions (contaminated with clay) for their nourishment during this stage of their

life. A sample was collected from these excretions for microscopic exiamination and chemical analysis. The microscopic examination revealed the presence of much pollen grains, quartz sand and clay.

The chemical analysis of this sample showed that it had the following composition[1]:

	%
Moisture	6.57
Waxy and fatty matters	0.42
Resinous matter	0.34
Silica (free and combined)	59.36
Ferric and aliminium oxides	4.54
Calcium carbonate	1.97
Magnesium carbonate	0.55
Sulphates (calculated as Na_2SO_4)	1.07
Chlorides (calculated as NaCl)	0.30
Sugars	23.83
Insect remains, pollen grains and water of hydration (by difference)	1.05
Total	100.00

These results showed that the deposits on the walls of the Dandara temple had almost the same composition as those which covered the walls of the temple of Edfu[2], and accordingly, they could be removed in the same way, namely[3]:

1. The very old deposits were wholly removed by water without leaving stains on the walls since their organic contents had almost completely disappeared.

(1) This analysis was made in The Chemical Laboratory, Department of Antiquities, Cairo, By Mr. A. E. Shaheen.

(2) Z. Iskander, *A.S.A.*, T. LVIII (1964), pp. 190-191.

(3) *Ibid.*, pp. 191-192.

2. The comparatively new nests as well as the fresh ones could be mostly removed by water, but the process was much slower and more difficult owing to their compactness and their higher contents of organic insoluble matter. Moreover, some brownish stains would be expected owing to the presence of waxy, fatty and resinous matters, specially if the fresh nests had been built on the surface of the stone and not on the old constructions of the bees.

The stains left on the stone surface proved to be easily soluble in sodium hydroxide solution, alcoholic potash, and less easily soluble in ammonium hydroxide solution. The ammonium hydroxide solution, however, was preferred to the other two solutions since its complete volatility would cause no efflorescence on the surface of the stone in the course of time.

II.—SEASONAL ACTIVITY OF THE INSECT

According to the studies made by the Entomological Department, Ministry of Agriculture, the bees which were living in the temple of Dandara were of the two species: Calicodoma sicula Sp. and Vespa orientalis F. Their time of activity in Dandara falls between mid-November and mid-April. Each female could lay about six eggs, one in each cell, surrounded with honey excreted by the adults in the clay nest. Very shortly after mid-April, the eggs produce larvae which do not change into virgins until the end of October; and by about mid-November the virgins are transformed into adults, which emerge from the nests and start their seasonal activity. This indicated that the most suitable time for the attack on the pest was between May and October, i.e., during the non-active stages of the insect.

On the basis of the above studies, it was clear that the control of bees in this temple would consist of the following main steps:

1. Removal of the clay nests containing the living larvae, a process which should be carried out during the period from May to October.

2. Killing the larvae so that they may not change into adults.

3. Removal of all the other thick deposits of old nests to reveal the reliefs which they concealed.

4. Protection of the temple from future attack by the bees.

Removal of the Clay Nests and Destroying the Larvae:

The removal of the clay nests and the cleaning of the walls of the temple was done almost exactly in the same way as that followed in Edfu Temple[1]. Thus, in brief, a great part of the deposits was removed mechanically by means of steel chisels and wooden hammers. The remaining layers for which the steel chisels could not be used lest the surface of the stone might be scratched, were sprayed with water under high pressure to soften the clay and wash down most of it. For this purpose, two water pumps, each of 10 h.p. and provided with two spraying guns, were used. The spraying with water was accompanied with rubbing the surface with stiff hair brushes until it became completely free of any adhering clay remains.

The brownish stains which appeared on the surface in some areas were mostly cleaned off with a 10% ammonium hydroxide solution and a stiff hair brush. The last traces of brown colour have disappeared by time, and the colour of the stone surface has now become almost uniform.

The clay nests which the bees built on the mud-brick enclosure wall of the temple were all removed mechanically.

All the clay nests which contained living larvae were crushed and thrown into water to kill the larvae so that they might not develop into adults.

The cleaning of all the external walls of the temple of Hathor, the two Birth Houses, the temple of Isis and the East Gate, as well as the removal of the clay nests found scattered on the roofs and the other buildings of the temple complex, needed about four months, from 3*rd* June to 28*th* September, 1957.

(1) *Ibid.*, pp. 193-194.

The results were very satisfactory. Pls. IV - XII show some parts of the inscribed walls of the temple of Hathor before and after cleaning. The cleaned surfaces revealed the whole reliefs in a very good state.

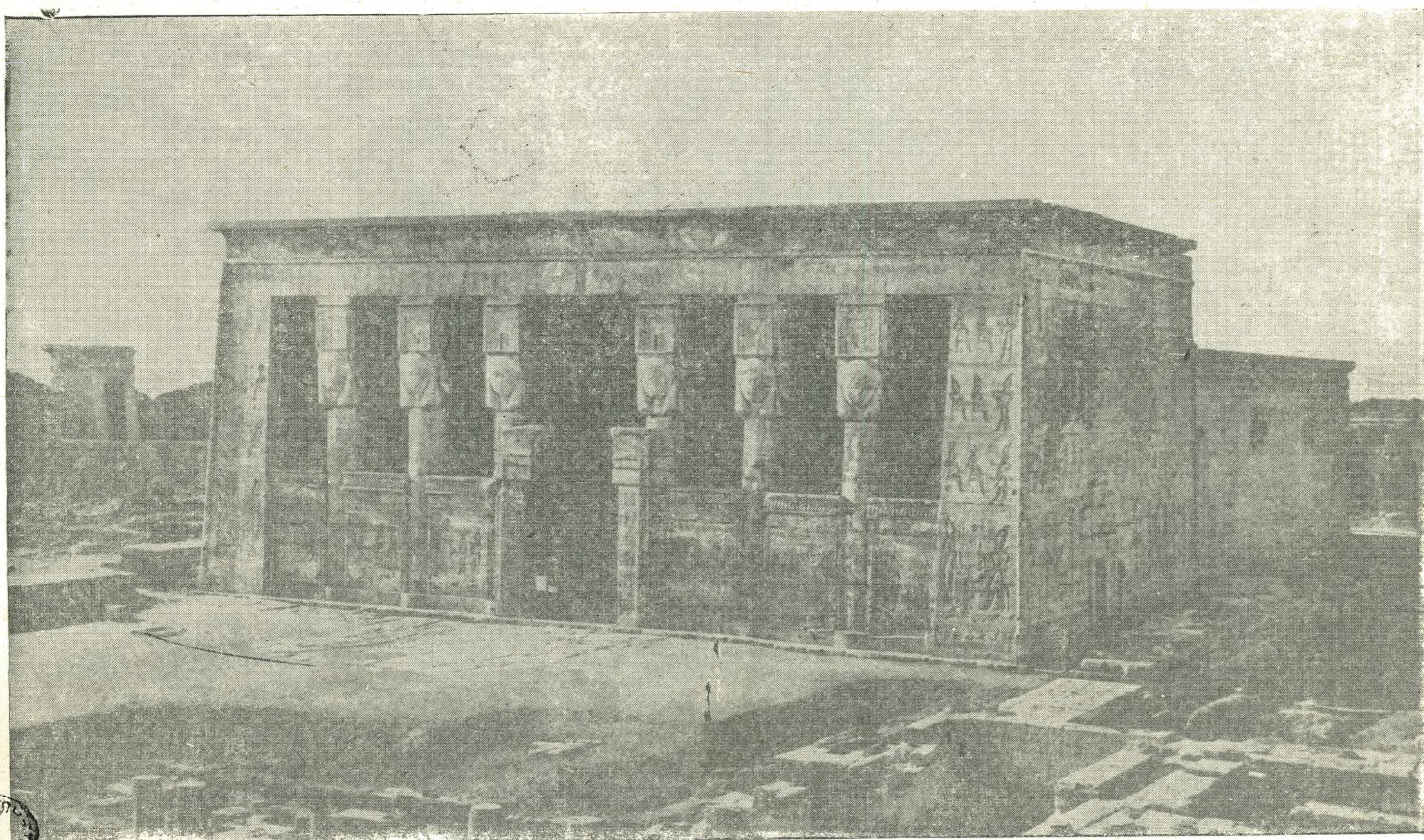
Protection of the Temple from further Attack by the Bees:

Although we have succeeded in getting rid of all the bees in the temple area by killing all the larvae, yet there was still the possibility of new attacks by bees which might come to the temple from far places. To protect the temple from such attacks, 50 bee-traps of the type used in the temple of Edfu[1] were also used here for trapping any bees as soon as they reach the temple area.

By the beginning of November every year, since 1957, the drawers of the 50 bee-traps were filled with an attracting odoriferous agent, composed of honey mixed with 20₀/⁰ of water, and distributed in the different parts of the temple specially in the shady places which the bees usually preferred for building their nests, as well as for reposing. These traps were collected by the beginning of May every year and were found to contain in most cases many dead bees and other insects. By this means, the temple was protected from being reattacked by bees until now.

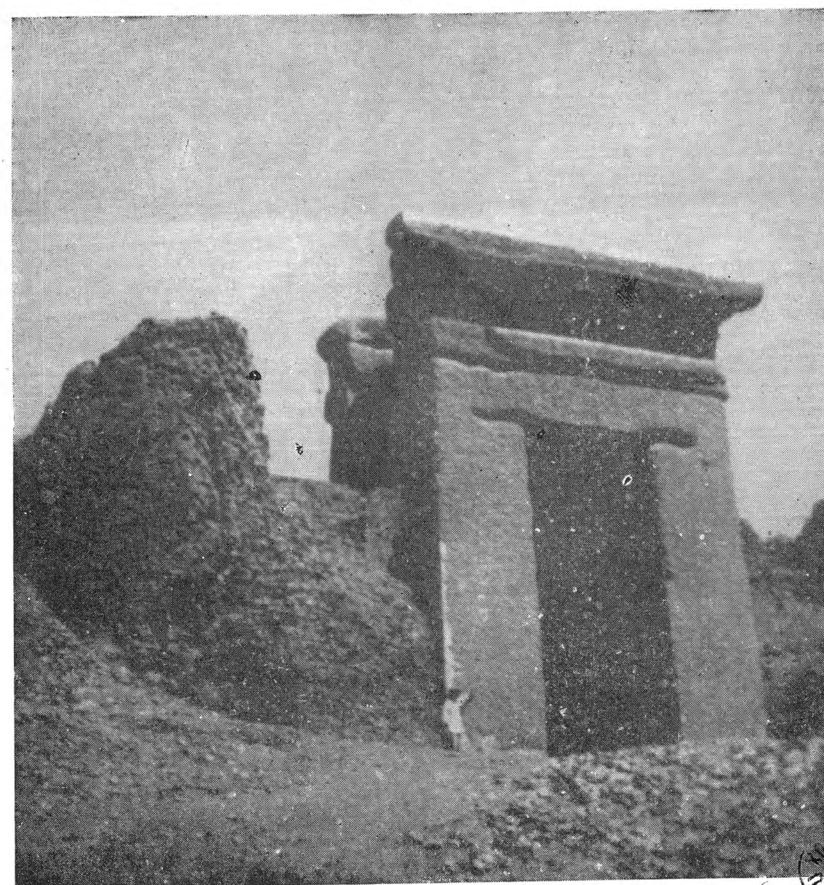
Zaky Iskander

(1) *Ibid.*, pp. 195-196, pl. XVII.



Facade and east side of the Temple of Hathor (AFTER: Chassinat, Le Temple de Dendera, Tome Premier, Pl. XXIII).

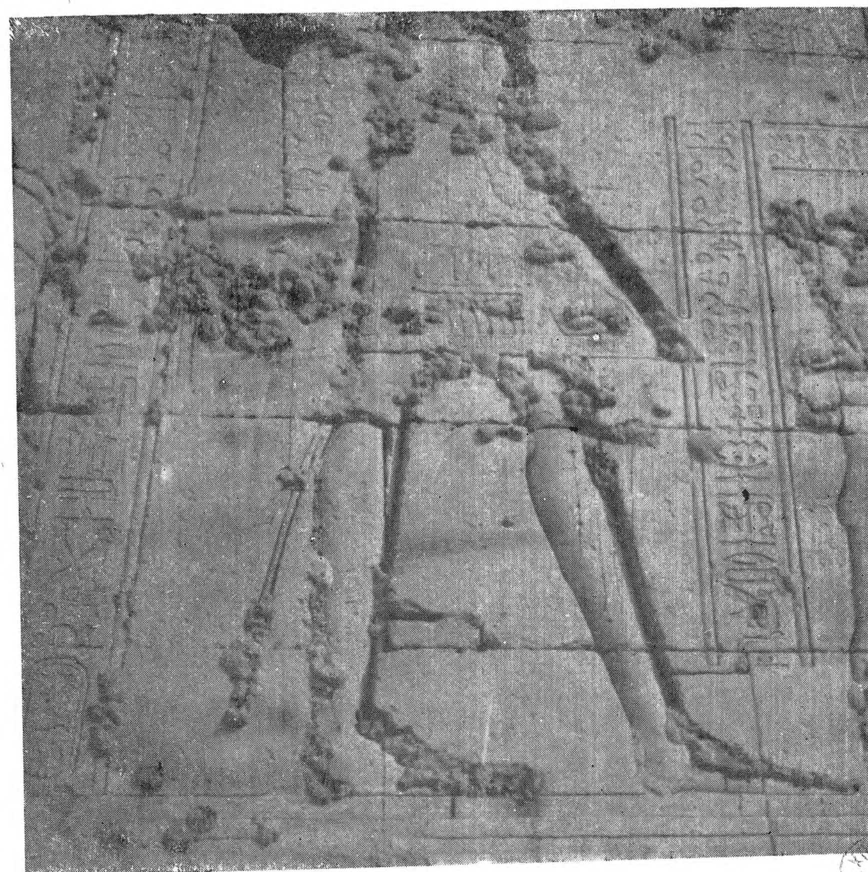
Pl. I



The East Gate, before cleaning, showing very thick deposits of bees-nests.



Near view of the deposits on the lower parts of the east side of the Temple of Hathor.



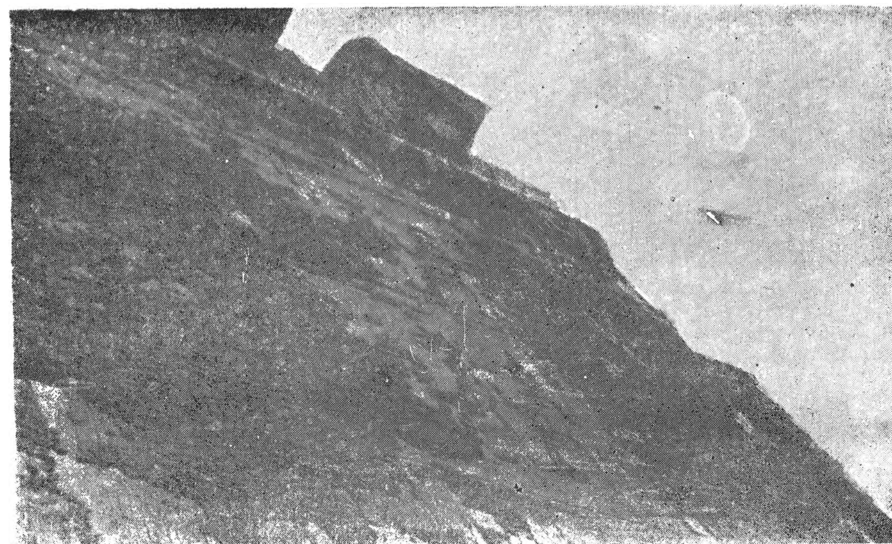


Clay nests of the bees in deep reliefs, Before cleaning.





The deep reliefs shown in pl. IV, after Cleaning.



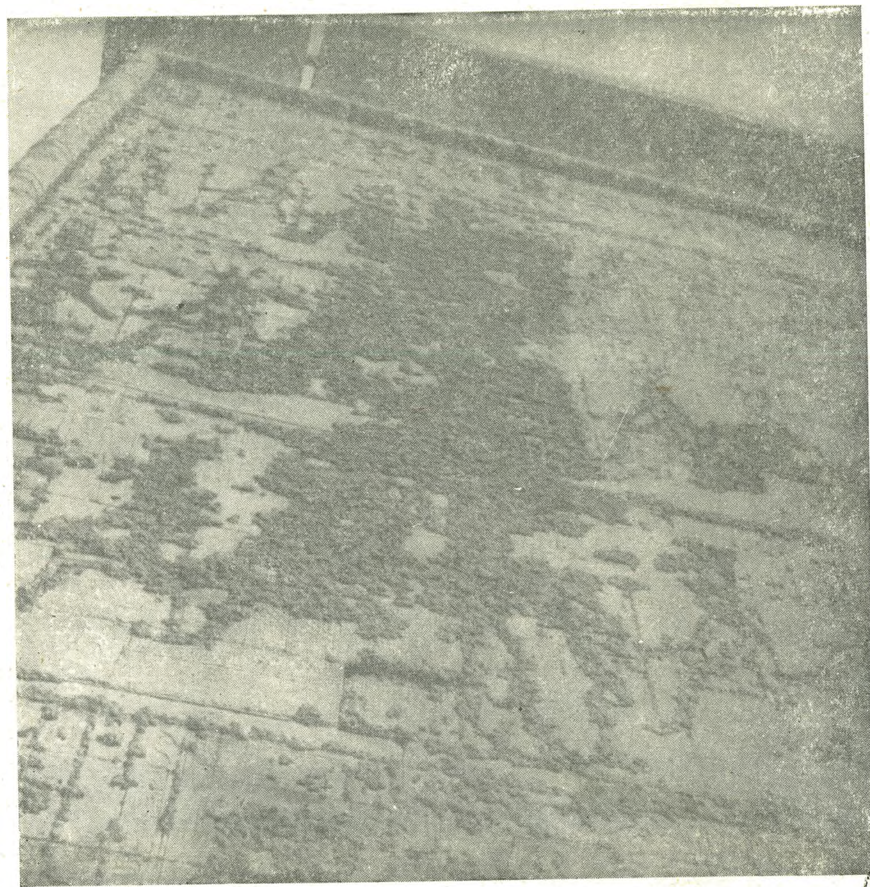
1. Before cleaning.





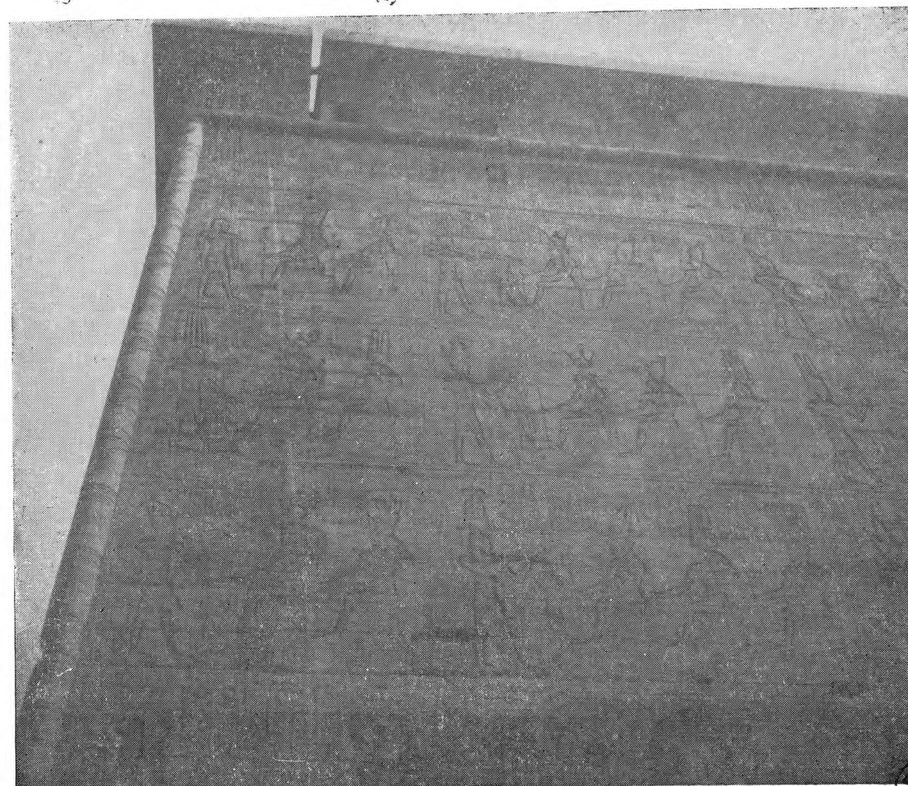
2. After cleaning

The Upper right corner of the north part of the west wall of the Temple of Hathor.



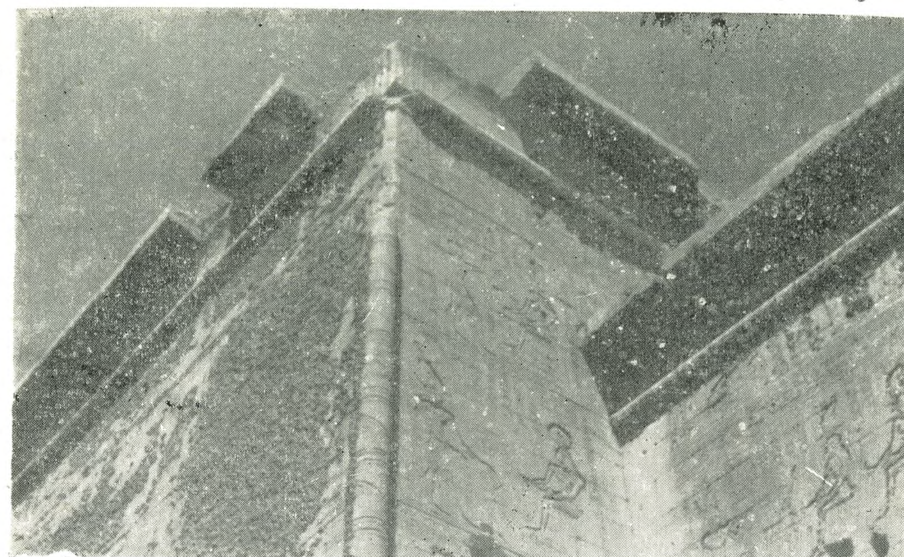


The upper left corner of the north part of the west wall of the Temple of Hathor, before cleanin.

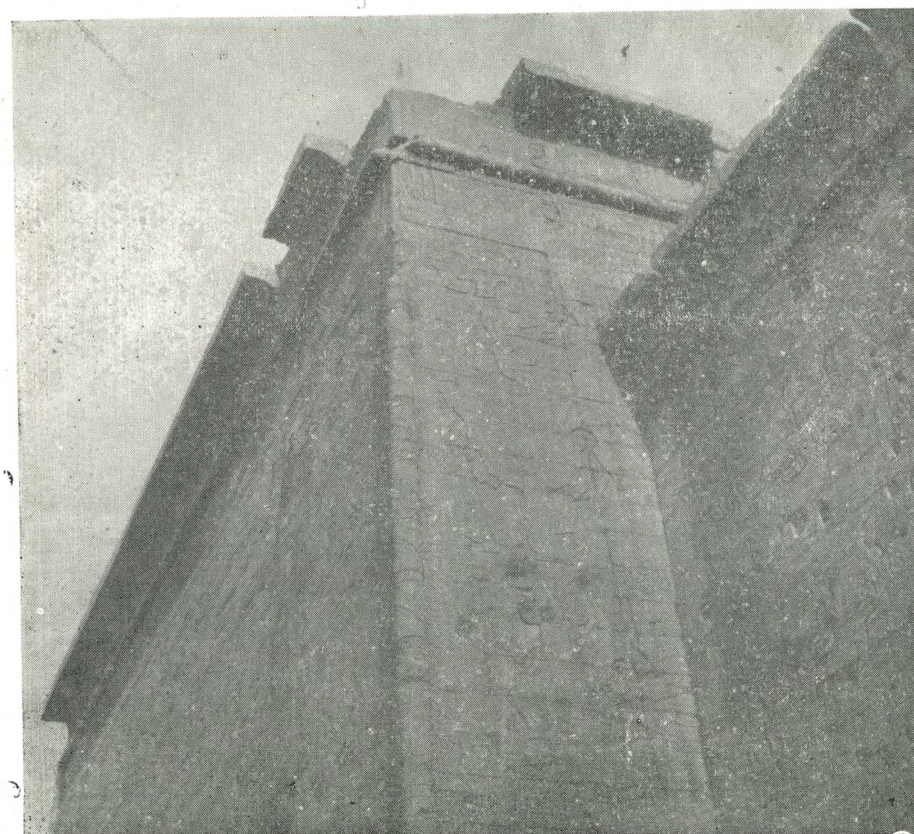




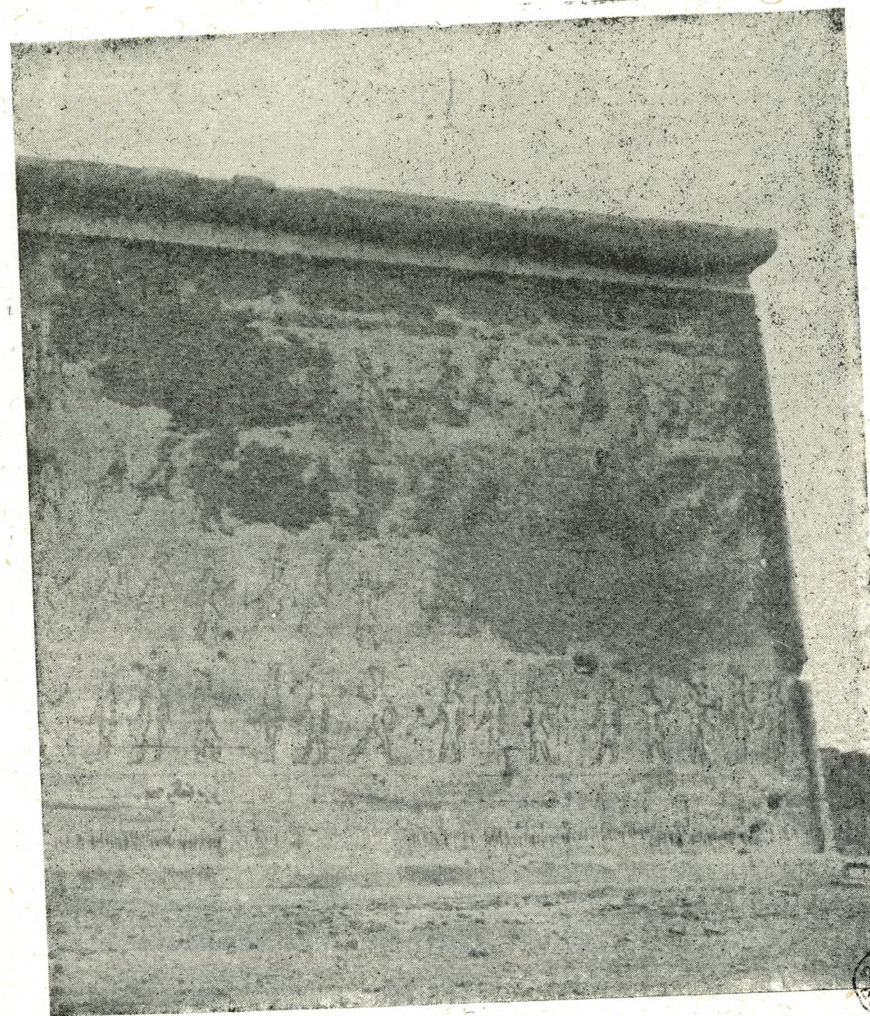
The upper left corner of the north part of the west wall of the Temple of Hathor, after cleaning.



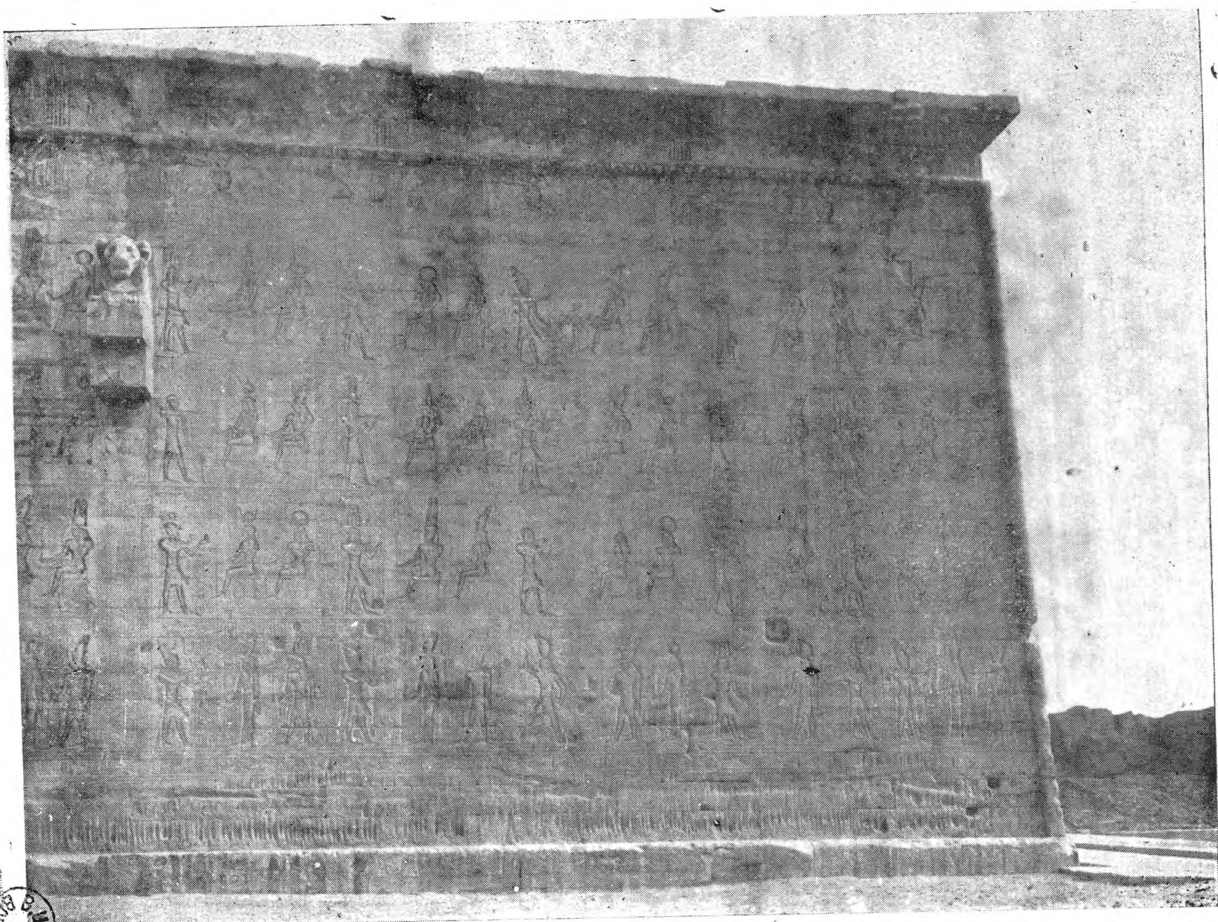
1. Before cleaning.



2. After cleaning.
Middle part of the west wall of the Temple of Hathor.



Southernmost part of the west wall of the Temple of Hathor, before cleaning.



Southernmost part of the west wall of the Temple of Hathor, after cleaning.



The whole west wall of the Temple of Hathor after cleaning. Behind it, part of the Temple of Isis can be seen. Infront, the facade after cleaning and before removing the scaffolds built to reach its upper parts.
(cf. Chassinat, Le Temple de Dendera, Tome premier, Pl. XXIV, which shows the state of this side before cleaning).

Pl. XII

TEMPORARY STUFFING MATERIALS USED IN THE PROCESS OF MUMMIFICATION IN ANCIENT EGYPT

PART II.—Fragrant Temporary Stuffing Materials

BY

ZAKY ISKANDER AND ABD EL MOEIZ SHAHEEN

INTRODUCTION

In a previous work published by Z. Iskander, (1) it has been proved that the process of mummification in the New Kingdom, and perhaps also in the Late Pharaonic Period, consisted of thirteen steps starting with the stripping off of the clothes of the dead and putting the corpse on the operating table (2), and ending with the bandaging of the mummy with linen bandages impregnated with gum-resins. In other words, these steps were the operations which were carried out on the body of the dead from the time it entered into the House of Mummification *pr-nfr* or *wꜥbt* (3) to the time the prepared mummy left it for the tomb or the house of Eternity *pr-n-ḏt*.

In step No. 3, an incision was made in the left side of the abdomen and all the contents of the abdominal cavity taken out, except, in most cases, the kidneys. Then the diaphragm was cut and the thoracic contents were taken out, except the heart. In step No. 4, the body cavities and the extracted viscera were washed with palm wine and spices, an operation which was perhaps meant to be a sort of preliminary sterilisation . . In step No. 6, the thoracic and abdominal cavities were packed with certain temporary stuffing materials prior to subjecting the body to dehydration

(1) Jean-Philippe Lauer et Zaky Iskander, "Données nouvelles sur la momification dans l'Egypte ancienne", *A.S.A.*, LIII (1955), pp. 193-194.

(2) H. E. Winlock, *Bulletin of the Metropolitan Museum of Art*, New York, December 1922, p. 34.

(3) Literally *pr-nfr* means "house of vigour" or "House of vitality and wꜥbt means "house of purification".

with dry nation in step No. 7. After the complete dehydration of the body, the thoracic and abdominal cavities were evacuated of their temporary stuffing materials and repacked with new dry stuffing materials (step No. 9) such as cinnamon, myrrh, cassia, linen cloth packets, linen packets soaked in resin, bags containing natron, sawdust and occasionally one or two onions. These new stuffing materials were meant to be left in the cavities permanently to avoid the collapse of the abdominal wall of the mummy so that the mummified body might acquire nearly the normal form it had during life, and perhaps also to give the body an enduring fragrant smell.

As previously explained by the authors (1), the temporary packing of the body cavities was made for the following reasons:

1. In the dehydration process, the body was buried in a heap of dry natron on a slanting mummification bed (2). If, therefore, the internal cavities of the body had been stuffed with natron and water-absorbent substances (such as linen cloth packets), the dehydration of the body tissues would become more efficient and quick, since the extraction of the water would take place both internally and externally at the same time.
2. The filling of the body cavities would prevent the collapse of the ventral wall.
3. The odoriferous substances introduced would keep the body fragrant while it was undergoing treatment, and would also combat any odour due to partial putrefaction which might take place during the lengthy dehydration process (3).

(1) Z. Iskander and A. E. M. Shaheen, "Temporary Stuffing Materials used in the Process of Mummification in Ancient Egypt, Part I, Earthy Stuffing Materials Found at Ard El-Naam, Mataria", *A.S.A.*, LVIII (1964), pp. 198-199.

(2) H. E. Winlock, "A Late Dynastic Embalmer's Table", *A.S.A.* XXX (1930), pp. 102-104. This table is now in the Cairo Museum, Guide No. 6286.

(3) The whole process of mummification usually needed seventy days, although there are much longer periods mentioned in a few cases (see Labib Habachi, "A Statue of Osiris made for Ankhefenamun, Prophet of the House of Amun in Khapu and his daughter", *A.S.A.*, XLVII, pp. 278-288), but the actual period needed for the dehydration process might only have been about half of these 70 days. (G. Elliot Smith and Warren R. Dawson, *Egyptian Mummies*, London, 1924, pp. 52-56, 61). The authors believe, however, that the dehydration process might have taken 40 days, while the remaining 30 days were needed for anointing, treatment with resins, bandaging, etc...

To fulfil these purposes, various types of temporary stuffing materials were used. Of these types, the following were previously reported.

1. Natron powder contained in linen packets(1). These were intended to speed the dehydration. These packets have been described by Iskander as being impregnated with gum-resins. Owing to the comparatively low proportion of gum-resin in the contents of these packents, however, the authors now belive that this impregnation was not made intentionally before putting the packets in the body cavities, but that it might have happened unintentionally later, while the packets were in the body cavities, in the following manner : The gum-resins contained in other packets (such as type 2 below) dissolved in the liquids which oozed from the body, and this solution impregnated the linen packets containing the natron. After the deydration process, these packets were removed from the body cavities, and the remaining natron and the gum-resins solution which impregnated it, were left to dry. The packets would, therefore, after drying look as if they had been intentionally impregnated with gum-resins.
2. Packets of linen cloth impregnated with gum-resin(2). These were introduced as water-absorbents, and at the same time would impart a fragrant smell to the body.
3. Straw and vegetable remains (3). These were used as fillers.
4. Coarse earthy powders containing much quartz sand(4). These were certainly used as fillers.

The samples analysed of these four types date back to Saitic Period (5).

(1) Jean-Philippe Lauer et Zaky Iskander, *op. cit.*, pp. 184-185.

(2) Jean-Philippe Lauer et Zaky Iskander, *op. cit.*, pp. 187-188.

(3) Jean-Philippe Lauer et Zaky Iskander, *op. cit.* pp. 188-189.

(4) J-P. Lauer et Z. Iskander, *op. cit.*, p. 191.

(5) J-P. Lauer et Z. Iskander, *op. cit.*, pp. 170, 174, 189.

5. Linen cloth packets of many layers impregnated with gum-resins and containing sand as a filler between the layers [1]. This type must have been much more efficient as water-absorbent than Type 2.

   Two of the samples dealt with of this type date back to the XIXth Dynasty [2] since they are inscribed with the name of Ramesses II. [3] The third sample may date back to the Late Dynastic Period.

In the present work, three samples of temporary stuffing materials will be considered, and they, fortunately, add two more types of temporary stuffing materials which were not recorded before.

Description of the Samples :

The three samples considered in this work were discovered in 1960.

The first sample was sent to the Chemical Laboratory, Department of Antiquities, Cairo, on 8th October. 1960, for analysis. As reported by the excavator, Mr. Abd El-Hafiz Abd El-Al, then the Chief Inspector of Antiquities of Cairo and Giza, it was contained in an oval pottery jar found in a plundered tomb (Plate I) discovered during the excavations of the Department of Antiquities at Tura El-Asmant in 1960. The jar was found almost full of sand and clay, under which lay the sample. No information indicating its date could be obtained, but the excavator thinks that it may date to the Late Dynastic Period. The sample received weighed about 5 grams. It is a yellowish brown powder in which yellowish white fragments of fine cloth could be noted.

The two other samples were received from the Qurna Inspectorate of Antiquities on 8th June, 1960. They were contained in two small intact bags of coarse cloth [4].

(1) Z. Iskander and A. E. Shaheen, *op. cit.*, pp. 207-208.

(2) H. Messiha, "Recent Excavations at Ard-El Naam", Ciaro, Part I, *A.S.A.*, LIX. (1966), pp. 190-192.

(3) Z. Iskander and A. E. Shaheen, *op. cit.*, pp. 199-200, Pls. I, II.

(4) As reported by the excavator, Ramadan Saad, the two bags were among the contents of one of eight large red pottery jars of different shapes found at Draa' Abu El-Naga North, very close to the tomb of Roy (No. 55) of the Nineteenth Dynasty, As shown in pl, II, these jars were found arranged, one beside the other, in the debris very near to the above mentioned tomb, The jar which contained the two bags - on the right, pl, II,—was found broken, height 57 cms, maximum diameter 25 cms.

Each bag was made of one piece of cloth in which the contents had been put, its four corners were then tied together to form a thick knot (Pl. III A and B). Each bag weighed about 350 grams, and contained a good amount of a yellowish brown heterogeneous somewhat coarse powder. Conspicuous in the two samples, were a few tiny granules of limestone and many tiny fragments of vegetable matter including straw and hard wood splinters of different shapes and perhaps of different kinds.

Microscopic Examination

The microscopic examination of the first sample showed that the fine cloth fragments were of linen. It also showed the presence of some quartz sand grains, as well as much amorphous opaque particles which might be some sort of gum-resin powder.

The microscopic examination of the second sample which was enclosed in bag A (Pl. III A) and the third sample which was enclosed in bag B (Pl. III B). showed that they contained much fine and coarse sand grains, amorphous particles most probably of powdered gum-resins, and many pieces of wood fragments and straw. It was not possible through our limited means of microscopic examination to identify the kinds of wood or plants to which the tiny fragments of wood and straw belonged.

The microscopic examination of the cloth of the two bags A and B gave the following results :

Bag A.—Both warp and weft are of linen fibres.
Number of threads per inch in warp = 50.
Number of threads per inch in weft = 30.
Weight of square yard after removal of resinous and fatty matter = 255 grams.

Bag B.—Both warp and weft are of linen fibres.
Number of threads per inch in warp = 50.
Number of threads per inch in weft = 22 (2-twist).
Weight of square yard after removal of resinous and fatty matters = 311 grams.

Preliminary Investigation :

Some preliminary tests were carried out to ascertain the main constituents of the three samples of which the following may be mentioned :

Ignition :

On ignition, the first sample gave a varnish-like sweet smell indicating the presence of resin or gum-resin.

The two other samples gave a very sweet smell. This smell was partly due to the presence of the tiny wood fragments, since on burrning some of these fragments alone, a very sweet fragrant odour was given.

The three samples left a good amount of ash after ignition.

Treatment with water :

The first sample dissolved partly in water giving a yellowish light brown solution, while tiny fragments of linen cloth floated on the surface and some residue including fine sand grains, settled. The water extract proved to contain a very little sodium chloride, but it contained no sulphate, carbonate or bicarbonate.

The second and third samples also dissolved partly in water giving a dark brown solution, while some tiny fragments of vegetable matter, mostly of wood, floated on the surface and a fair amount of reisdue mostly of sandy, earthy matter, settled. The water extracts proved to contain sodium chloride and sulphate which are among the constituents of natron.

The aqueous solutions of the three samples gave a permanent froth on shaking indicating the presence of soluble soaps.

Treatment with Hydrochloric Acid :

The first sample dissolved partly and without effervescence in dilute hydrochloric acid while very little siliceous matter remained.

The two other samples dissolved partly in the acid, with little effervescence leaving much siliceous matter mostly of coarse sand.

The filtrate in the the three cases proved to contain ferric, aluminium, calcium and magnesium ions, Phosphates could be found in traces in the third sample.

These investigations, though simple and preliminary, as well as the macroscopic and microscopic examination of the samples indicate that they had been most probably used as temporary stuffing materials, since they contained gum-resins, earthy matter, natron remains, vegetable matter and probably small amounts of soaps.

The quantitative analysis of the three samples proved beyond doubt the validity of this conclusion as will be explained below.

Quantitative Analysis of the Samples :

The procedure adopted for the analysis of these samples was almost the same as that used by the authors[1] for the analysis of analogous temporary stuffing materials. The three samples proved to have the followoing composition:

(1) Z. Iskander and A. E. Shaheen, *op. cit.*, pp. 202-204.

Constituents	(1)	(2)	(3)
	%	%	%
Humidity	6.70	3.55	1.86
Free fatty matter[1]	2.69	0.36	0.70
Fatty acids found as soluble soaps[2]	2.12	1.25	2.24
Resinic acids found as soluble soaps[2]	1.61	1.88	0.95
Fatty and resinic acids found as insoluble soaps	nil	0.98	1.69
Alcohol-soluble part of gum-resins	35.11	11.89	10.67
Water-soluble part of gum-resins	6.72	7.18	13.51
Insoluble part of gum-resins[3]	14.14	2.72	4.50
Sodium bicarbonate[4]	nil	4.81	3.83
Sodium carbonate[5]	0.51	1.72	0.17
Chlorides (calculated as NaCl)	0.68	17.83	20.25
Sulphate (calculated as Na_2SO_4)	nil	3.76	13.22
Silica[6]	11.00	34.47	15.71
Ferric and aluminium oxides	7.08	4.01	4.36
Phosphorous pentoxide	nil	nil	traces
Calcium oxide	8.39	1.97	2.65
Magnesium oxide	1.07	0.28	1.06
Tiny wood fragments and other vegetable matter (by difference)	nil	1.34	2.63
Organic combustible part of the linen cloth fragments (by difference)	2.18	—	—
TOTAL	100.00	100.00	100.00

1.—This was obtained by extracting the sample with petroleum ether. The extract was a yellowish amorphous solid which made a definite transparent stain on the filter paper.

2.—These fatty and resinic acids were solids of low melting points.

3.—This part was only soluble in 10 % aqueous sodium hydroxide solution. Although gum-resins should be wholly soluble, partly in ethyl alcohol and partly in water, yet by passage of time, they, as well as resins, may change their solubilities and become partly insoluble in the solvents in

which they used to dissolve when they had been fresh. This change in solubility was also noticed before by Lucas [1] and by Zaki and Iskander [2].

(4) The sodium bicarbonate, carbonate, chloride, and sulphate are the usual constituents of Egyptian natron [3]. Their presence in the samples, wholly or partly, must be due either to putting the natron intentionally in the bags, or to impregnation of the natron solution into the packets while they were stuffed in the body cavities.

(5) This sodium carbonate is now mostly found in combination with the fatty and resinic acids as soluble soaps.

(6) Since sample No. 1 contained much linen remains which would leave after ignition an ash rich in calcium oxide and contains lower proportions of silica, ferric and aluminium oxides, and magnesium oxide [4], the percentage of external earthy matter in this sample was approximately determined by assuming that the calcium oxide present in the ash was wholly due to the linen, calculating the relative percentages of the other constituents in the ash due to linen, and subtracting these percentages from their total percentages in the ash of the sample. Accordingly, the percentage of external earthy matter was calculated as 11.18 % (7.45% of SiO_2 and 3.73% of R_2O_3).

As to samples Nos. 2 and 3, the silica, ferric and aluminium oxides, calcium oxide and magnesium oxide have almost wholly originated from earthy matter, since the amount of vegetable matter present in the two samples is very small, and leaves a negligible amount of ash on ignition.

(1) A. Lucas, Preservative Materials Used by the Ancient Egyptians in Embalming 1911, p. 45.

(2) Ahmad Zaki and Zaky Iskander, "Materials and Method Used for Mummifying the Body Amentefnekht, *A.S.A.*, XLII (1943), pp. 233, 236.

(3) A. Lucas, *Ancient Egyptian Materials and Industries*, Fourth Edition, revised and enlarged by J. R. Harris, London, 1962, p. 267.

(4) Jean-Philippe Lauer et Zaky Iskander, *op. cit.*, p. 192.

Interpretation of Results :

The presence of solid fatty matter and soaps of solid fatty acids in the three samples denotes that they were once used as temporary stuffing materials for filling the thoracic and abdominal cavities of the body while it was undergoing dehydration([1]). As mentioned elsewhere-([2]), the alkaline solution of sodium carbonate found in the natron, which was both packed in the body and put all over it, would emulsify most of the fats of the body, forming an emulsion containing soaps and free fatty matter which contaminated the temporary stuffing materials. The resinic soaps must have originated from the interaction of the sodium carbonate solution with the resinous part of the gum-resins which were also packed inside the body cavities as temporary stuffing materials, as mentioned above.

For the sake of comparison and in order to get a clearer idea about the present composition of the three samples, after they had been used as temporary stuffing materials, we may summarise their analytical results in the following table :

	(1)	(2)	(3)
	%	%	%
Humidity	6.70	3.55	1.86
Free fatty matter	2.69	0.36	0.70
Fatty and resinic acids found as soaps .	3.73	4.11	4.88
Gum-resins	55.97	21.79	28.68
Natron remains	1.19	28.12	37.47
Earthy matter	11.18	40.73	23.78
Linen cloth fragments	18.54	—	—
Tiny wood fragments and straw	—	1.34	2.63
TOTAL . . .	100.00	100.00	100.00

([1]) J-P. Lauer et Z. Iskander. *op. cit.* p. 185.

([2]) Z. Iskander and A. E. Shaheen, *op. cit.*, p. 206.

From these results, it is clear that the Tura El-Asmant sample differs very much in its compostion from the two other samples. They show that it belonged to a certain type of temporary stuffing materials, while the Qurna samples belonged to another type. Each of these two types, therefore, will be dealt with separately.

I. —*The Tura El-Asmant Sample* :

Other than the free fatty matter and soaps, which originated in the manner explained above, the other constituents of importance in this sample are the gum-resins, natron remains, the earthy matter and the linen cloth fragments.

The earthy matter is mostly, if not wholly, composed of sand and clay (silica and iron and aluminum oxides). It must have found its way into the sample through contamination with external earthy matter, since the sample was found at the bottom of an open jar which was almost completely full of sand and clay from the soil.

Since the natron remains in the sample are very little the packet under consideration could have not been one of the packets of natron which were put in the body cavities for the sake of dehydration, but the small amount of natron present must have originated in the sample through impregnation of the natron solution into it while the packet was used as a temporary stuffing material during the dehydration process. The absence of sodium sulphate, however, is not astonishing, since natron may be sometimes almost free of it([1]).

The high percentage of gum-resins in the sample indicates that the packet was filled with a large amount of powdered gum-resin. The packet itself was made of several layers of fine linen cloth to prevent the escape of the powder through its walls.

II. —*The Qurna Samples* :

Other than the free fatty matter and the soaps which originated in the manner previously explained, these two samples contain fair amounts of natron, earthy matter, gum-resins, and tiny fragments of fragrant wood and other vegetable matter.

([1]) A. Lucas, *Ancient Egyptian Materials and Industries*, 4th edition, pp. 267, 493.

The fairly high percentage of natron in the samples denotes that natron was put intentionally into the packets for speeding the process of dehydration.

The earthy matter could not have originated from external sources due to contamination with sand or clay from the soil, since the two bags were found tightly tied among the contents of the jar (Pl. III). Since the quantities of this earthy matter is great, it could not have existed in the natron as impurities and, therefore, they must have been mixed with the natron on purpose.

The gum-resins are present in a fairly high proportion in the two samples. Likewise it was easy to confirm their presence microscopically. These gum-resins must have been, therefore, included in the samples intentionally, for imparting a good smell to the body while it was buried in the dry natron.

The tiny splinters of fragrant wood must also have been included in the mixture to give a fragrant smell to the body while it was undergoing treatment.

Accordingly, it may be concluded that the two bags had been originally packed with :

1. natron for speeding dehydration.
2. gum-resins to impart a sweet smell to the body.
3. tiny fragments of fragrant wood to impart to the body a longlasting fragrant smell.
4. earthy matter and straw as fillers.

A powder having almost the same composition was found in ten large jars in the tomb of Maherpra of the Eighteenth Dynasty at Thebes (1). Lucas (2) states that it was a refuse embalming material since it was mixed with resin and sawdust. In our opinion, this powder must have been used as a temporary stuffing material, although no attempt has been made to test for fatty matter or soaps in it. The same applies, most probably, to most of the other refuse embalming materials quoted by Lucas.

(1) Lortet et Gaillard, *La faune momifiée de l'ancienne Egypte*, I, pp. 317-318.
(2) A. Lucas, *op. cit.*, pp. 278.

CONCLUSION

In view of what has been mentioned above, it may be concluded that :

I. —The three samples under consideration add more evidence to support the fact that the body cavities had been packed during the lengthy dehydration process with temporary stuffing materials which were removed after dehydration and replaced by new fresh stuffing materials. The temporary stuffing materials which had been taken out of the body cavities were buried in the tombs, in pits or in the sand or debris near the tomb (1), (2).

II. —The composition of the three samples provide us with the following two new types of temporary stuffing materials :

(1) The first type is represented by the Tura El-Asmant sample. It consisted of some sort of powdered gum-resin enclosed in a packet of several layers of fine cloth. The gum-resins used by the Ancient Egyptians are believed to be either bdellium or myrrh, and most probably myrrh (3). That the Ancient Egyptians used powdered myrrh for this purpose agrees with what was mentioned by Herodotus (5th Century B. C.) that "after taking out the entrails and cleansing the body and scouring it with palm wine they filled the body with pure pounded myrrh and cassia and other perfumes"(4), (5). The myrrh would impart a fragrant smell to the body while it was buried in the dry natron on the mummification bed.

(2) The second type is represented by the two Qurna samples. It consisted of natron, earthy matter, gum-resins and tiny fragments of fragrant wood. Such a composition

(1) A Lucas, *op. cit.*, pp, 278-279,
(2) Labib Habachi, "Clearance of the Tomb of Kheruef at Thebes", *A.S.A.*, LV(1958), pp. 335-336.
(3) A. Lucas, *op. cit.*, p. 373.
(4) Herodotus, *Book II*, 85-86.
(5) G. Elliot Smith and Warren R. Dowson. *Egyptian Mummies*, 1924, pp. 57-58.

would serve for nearly all purposes for which the temporary stuffing was made, namely, speeding the dehydration of the body, imparting a fragrant smell to it, and acting at the same time as a filler.

Powdered aromatic wood has been found on the skin of the mummies of Sequenenre and on the pelvis of the mummy of an unknown woman, perhaps the Princess Meritamun. Thus Elliot Smith mentioned regarding the former, that "The spicy odour of the skin of the mummy of Sequenenre was due to the fact that it has been sprinkled with powdered aromatic wood (sawdust) "(1). He reported on the other that the pelvis "is packed with a hard mass of resin and aromatic sawdust" (2).

A few pieces of fragrant wood were found in the tomb of Tutankh-Amun(3) in a small red pottery jar, on which is inscribed "Substance used for perfuming". Also Winlock mentioned that "small splinters of wood which was doubtless originally aromatic" of Eleventh Dynasty date were found at Lahun (4), and of the same date "little sticks of sweetscented wood for perfumes"(5)were found at Thebes.

The botanical species of the fragrant wood in our Qurna samples could not be identified owing to their very small size. If it will be possible one day to identify it, the origin of the fragrant wood used in Ancient Egypt may be known. Metcalfe reported that scentedwoods occur in Uganda and Kenya (6).

The authors wish to express their thanks to Mr. Abd El-Hafiz Abd El-Al and Mr. Ramadan M. Saad for providing the samples for this work.

Z. Iskander and A.E. Shaheen

(1) G. Elliot Smith, "The Royal Mummies", Cat. Gen. des Antiquités Egyptiennes du Musée du Caire, Le Caire, 1912, No. 61051, p. 1.

(2) G. Elliot Smith, op. cit., p. 7.

(3) A. Lucas, op. cit., p. 97.

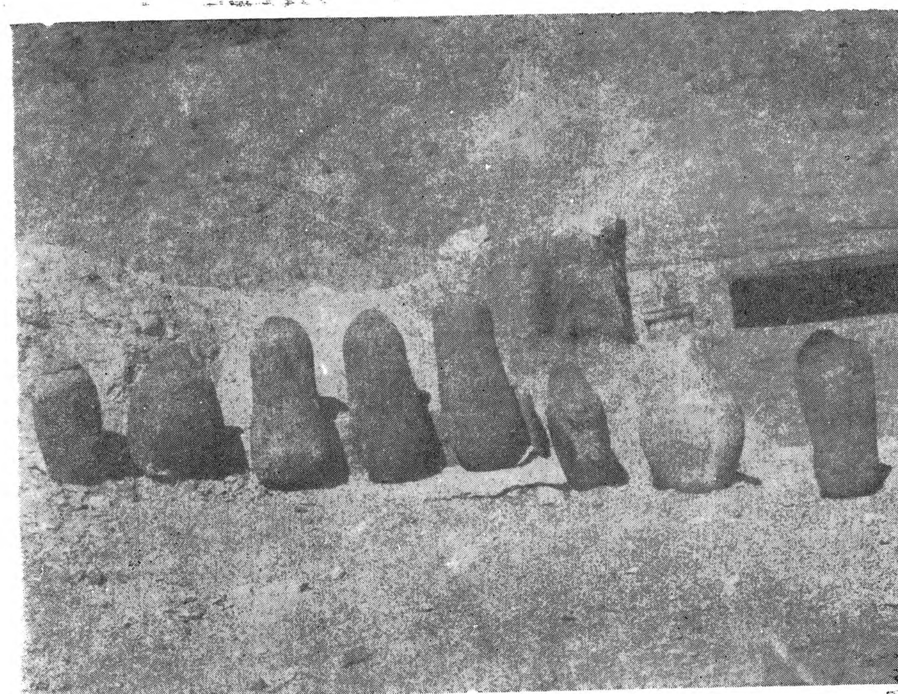
(4) H. E. Winlock, "Treasure of El Lahun", p. 67.

(5) H. E. Winlock, "Bulletin of Metropolitan Museum of Art, Egyptian Expedition", 1930-1931, pp. 32, 35-36, fig. 34.

(6) C. R. Metcalfe, Bull. of Misc. Information, No. 1, 1933, Royal Botanic Gardens, Kew.



The pottery jar which contained the first sample as found in a plundered tomb, Tura El-Asmant, 1960.



The eight jars as found in the debris at Draa Abu El Naga North, Qurna, 1960. The first jar to the right is the jar from which bags A and B were taken and sent for analysis.

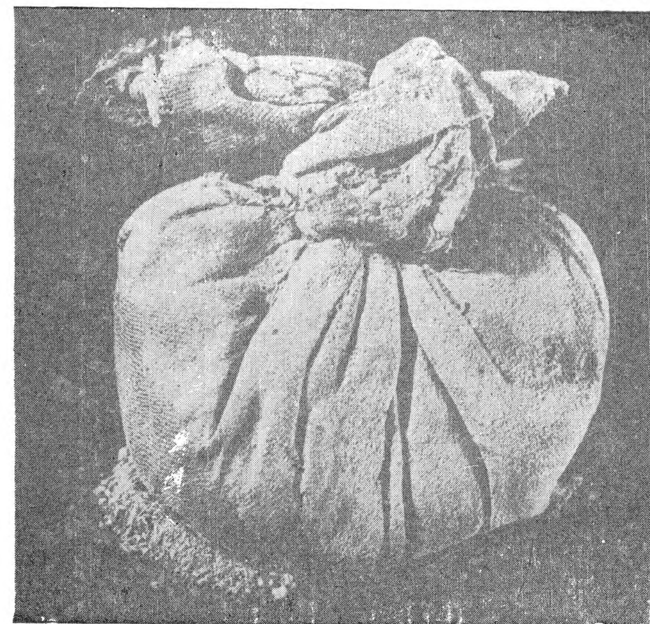


Fig. (*A*) — Bag (*A*)



Fig. (*B*) — Bag (*B*)

These two bags are very similar to the hieroglyphic sign 𓎼 sšr, used as a determinative for 'rf = "tie up", "pack", "envelop" ; also as a determinative for stj = "perfume", which was kept in linen bags. See. A. Gardiner, "Egyptian Grammar" (1957), p. 526, V 33.

Fouilles à Tanis

RAPPORT SUR LA XXIVe CAMPAGNE (1968-1969).

PAR

JEAN YOYOTTE

La XXIVe campagne de la Mission française des Fouilles de Tanis a eu lieu du 15 décembre 1968 au 23 mars 1969, avec la collaboration de :

— Wolfgang BEHR, ingénieur topographe-cartographe,

— Dominique CHARRON, technicien collaborateur d'architecte (stagiaire E.P.H.E.),

— Christian MULLER, photographe de chantier,

— Costa ALIFRANGHI, photographe (musée et magasins), et avec la participation, durant la seconde moitié de la campagne, de:

— Christiane COCHE, élève titulaire E.P.H.E.,

— Alain ZIVIE, élève titulaire E.P.H.E.

Le Service des Antiquités était représenté sur le terrain par MOHAMMED ABD-EL-HAK inspecteur des Antiquités de l'Isthme de Suez, en poste à Zagazig.

Le matériel pour la topographie avait été gracieusement prêté par la Maison KERN, Aarau, Suisse et par le Cadastre de la Ville de Genève.

COMPTE RENDU DES TRAVAUX

(I) *Recherches sur les monuments provenant de Tanis.*

Une connaissance précise des types d'objets rendus par le site, la trouvaille de raccords entre fragments recueillis à des dates différentes, enfin la publication définitive de vastes séries d'objets tanites, demandent que soit établi, au préalable, un répertoire systématique des gros et petits monuments

qui ont été découverts à Tanis et se trouvent dispersés dans les musées et collections, sans qu'ils aient été, souvent, publiés, ni même signalés. Parallèlement au classement et à l'étude en France des *Archives Mission Montet*, il convient donc de poursuivre nos enquêtes muséographiques en commençant, bien entendu, par le Musée du Caire.

L'aimable coopération de M. Henri RIAD, Directeur du Musée, de MM. ABD EL-KADER SELIM, GAMAL SALEM, MOHAMED MOHSEN et des assistants de la conservation a permis de poursuivre et de mener fort loin, en décembre puis à la fin de mars 1969, la besogne commencée par Jean Yoyotte dans une mission faite en mars 1968. Toute l'équipe y a participé : le dépouillement du *Journal d'Entrée* est presque entièrement terminé et les entrées concernant les pièces venant des travaux faits à Tanis par MARIETTE (1861-63), PETRIE (1884), BARSANTI (1904) et le regretté P. MONTET (1929-1949) ont été recopiées presque intégralement. D'heureuses recherches dans les *Temporary Registers* et autres répertoires ont été menées. Laissant pour l'instant de coté les mille petits objets conservés au premier étage, on s'applique à localiser puis à photographier les gros monuments qui, au rez-de-chaussée, sont exposés dans les galeries ou conservés dans les réserves. Le transfert à l'air libre du contenu de la réserve "Arcade 55" nous a permis d'identifier la totalité des fragments que BARSANTI disait avoir enlevés de San en 1904 (*A.S.A.E.* 5 (1905), 203-214 et dont beaucoup restaient à publier et même de retrouver des fragments tanites inconnus. Cette opération a permis de faire des constatations originales :

— Surchargés d'inscriptions de Psousennès, deux débris inédits rapportés en 1904 et un fragment retrouvé par ailleurs dans les ruines médiévales de Tennis (IVe - XIIe siècles) appartiennent en fait aux longues bases plates qui soutenaient deux illustres sculptures datant de la XIIe dynastie : le groupe des deux "Nils" C.G. 392 et son pendant fracassé C.G. 531, dont un torse était en Italie dès le XVIe siècle (Rome, Mus. Terme n° 8607). Il nous a semblé, au passage, que les deux jumeaux, sauvagement barbus et chevelus, représentés en train d'apporter des poissons, des oiseaux et des papyrus, ne sont autres que les dieux Hepouy et Iakes, patrons, toujours associés l'un à l'autre, des terrains marécageux, des lieux de chasse, des pêcheries et des lacs du Delta septentrional. Enfin retrouvé au Musée, un beau pied de statue, vu jadis à San par Rougé (*BE* 25, 136) puis Pètrie (Tanis I, n° 40), donne d'ailleurs Ramsès II comme "l'aimé de Hepouy seigneur des régions marécageuses".

— Un débri voûté de quartzite s'est avéré appartenir au naos monolithe que Ramsès II avait consacré dans Pithom (Tell el-Maskhuta) et qui était bien connu par un ensemble de blocs et d'éclats raccordés et exposés à Ismaïlia jusqu'en 1957 (et maintenant réfugié au Caire), ainsi que par le fragment Paponot (Louvre E. 20572). D'autre part, un fragment de porte, dont la provenance reste à préciser, s'est révélé être le remploi par retaille d'un relief mural de Ramsès II, taillé lui-même dans un bloc au nom d'Ounas (Ve dynastie).

— A la série des statues privées prolémaïques de San, on peut ajouter maintenant, le beau corps de granit, retrouvé au Musée, du général mendésien Amphiomis (transfert 1904) et d'autre part la très célèbre tête dite du "Nubien" (Alexandrie 3204).

Un rapport détaillé et illustré sur l'identification des pièces venues du transfert fait en 1904 sera adressé à M. le Directeur du Musée.

(II) *Fouilles et recherches à San el-Hagar* (janvier-mars 1969).

Expérience de cet hiver froid, venteux et pluvieux qui invite à penser que le souhait funéraire de "bénéficier du doux souffle du vent" ne fut pas inventé par les habitants du Delta septentrional, onze semaines sur le terrain ont permis d'éprouver le courage des jeunes assistants et de développer l'implantation de la M.F.F.T. En improvisant une

forge de campagne, près d'un kilomètre de vieux rails Decauville a été mis en état de servir et le magasin à antiquités a été radicalement nettoyé et abondamment meublé de rayonnages.

W. BEHR a implanté les 12 points fixes pour préparer le relevé topographique d'ensemble du tell de San et il a pu terminer la carte au 1 : 5000 des quartiers Centre-Ouest et Sud-Ouest (voir pl. I et IV). Deux campagnes suffiront à terminer le relevé qui sera appelé à remplacer celui de Jacotin (1 : 4500, *Atlas* de la *Description de l'Egypte*). Pour rendre possible la description des particularités topographiques et archéologiques des différentes parties du tell, les collines, plaines et vallées ont été dotées de surnoms (la toponymie locale étant pratiquement muette).

J. YOYOTTE a pu trouver tant bien que mal le temp d'arpenter les vastes étendues du site pour faire des observations concernant la morphologie des reliefs, nés de l'accumulation de constructions que l'homme a bâties au-dessus et au pourtour d'une bosse de sable naturelle (gézira) et de l'action complexe du ruissellement et du vent. Il conviendra de faire un jour la prospection géologique pour déterminer le relief de la *gezira* primitive (relief qui paraît commander le développement urbain de San).

L'interprétation des constatations stratigraphiques qu'on pourra faire à Tanis et sur les autres grands *tells* du Delta, demanderait, en outre, à être guidée par une étude spécialisée de géomorphologie portant sur la formation et l'évolution des reliefs de San.

Quelques recherches particulières ont été faites dans le temple d'Amon pour confirmer des raccords, supposés lors de nos travaux au Caire, entre des fragments transportés au Musée et certains au Caire, entre des fragments transportés au Musée et certains fragments demeurés *in situ*.

Costa ALIFRANGHI a poursuivi l'enregistrement photographique de petits objets (en magasin) et de blocs et fragments de sculptures provenant des fouilles de la Mission Montet. A peu de choses près, le travail commencé en 1965

est terminé. Grâce à l'acharnement de Christiane COCHE et Alain ZIVIE, le collationnement et le rangement des petits objets et fragments décorés conservés dans le Magasin et dans le Garage Nord du Rest-house du S.A.E. ont été menés bon train. Lors de la prochaine campagne, il conviendra de faire la même opération dans le Garage Sud et de construire en briques un magasin extensible pour aménager une sorte de musée lapidaire où seront abrités et classés les blocs anciennement découverts et où viendront prendre place les pierres inscrites que la suite du dégagement du Lac Sacré fera sûrement apparaître. Il convient de rappeler qu'une quantité assez importante de pièces (dont deux appartenant à la série "archaïsante" datant des obscurs rois tanites contemporains, semble-t-il, des éthiopiens) n'ont pas été publiées par P. MONTET dans son *Lac Sacré de Tanis* (Mém. A.I.B.L., XLIV, 1966) et que nous ne devrons reprendre le démontage du Lac Sacré qu'après avoir dûment classé le matériel découvert et lorsqu'on aura pu bâtir un local pour protéger reliefs et textes des intempéries et des hommes.

Préface indispensable à cette reprise des travaux du Lac Sacré, il convenait, selon le programme établi en 1966 (pl. II), de poursuivre l'enlèvement des déblais qui encombrent les abords du Lac et en même temps d'aménager une large route d'évacuation pour permettre d'achever un jour le déblaiement de tout le fond du Temple d'Amon.

Ce programme implique la poursuite minutieuse, jusqu'à achèvement, de la fouille du Temple de Khonsou, tel que les travaux de MARIETTE, de PETRIE et de MONTET l'ont laissé. Au cours de cette XXIVe campagne, on a rasé les deux gros *kôms* de déblais qui bordaient ce temple au Nord et au Sud (pl. III, fig. 1) ; de nombreux éclats décorés et inscrits de la XXXe dynastie ont été alors récupérés. Une fouille "en damier" du fond du Temple de Khonsou a pu alors être commencée : de nouveaux restes de la XXXe dynastie (morceaux des plafonds peints), d'importants fragments du naos de basalte (Nectanébo II) et de la statue agenouillée de Ramsès VI ont été tirés du sol bouleversé du bâtiment arasé (pl. III, fig. 2). On a cru constater, en fin de campagne, que le fond du Temple de Khonsou ne se raccordait

dait pas avec le mur latéral d'Amon. La campagne ultérieure permettra d'en finir avec ce secteur, de fixer ce qu'on peut savoir du plan du sanctuaire du dieu fils et de commencer l'inventaire et l'étude systématique des nombreux restes de décor du Temple de Khonsou.

Cependant, plutôt que de poursuivre exclusivement les tâches arides que constitue le nettoyage des Temples en vue de compléter et d'interpréter les fouilles antérieures, nous avions, cédant aux avis de nos aînés et de nos cadets, décidé de porter aussi la pioche en terrain neuf. Il a été procédé à l'examen stratigraphique d'une aire située au sud du téménos de Mout et Khonsou ("Temple d'Anta"), juste aux confins des quartiers Centre-Ouest et Sud-Ouest (pl. IV). Deux modestes sondages (1969 - I et 1969 - II) ont été faits sur les pentes occidentales du Sud-Ouest ("Collines des ours") et ont révélé deux couches de bâtiments hellénistiques au-dessus d'accumulations de détritus se prolongeant jusqu'à une grande profondeur.

Le Sondage 1969 - III a été fait dans un terrain plus haut, sur un large replat au sud du "Kôm Blayboy" (pl. V, fig. 1). C'est là le point le plus septentrional où l'humidité dessine nettement sur le sol le plan de bâtiments enfouis (cf. P. VERNUS C.R.A.I.B.L. 1967, 594-595). Sous la surface est apparu un vaste édifice de grosses briques crues (superficie dégagée, environ 30 sur 45 m.), groupant des chambres ou puits rectangulaires à l'intérieur d'un énorme mur, mais qui n'est conservé que sur une hauteur variant de 0,50 à 2 m. (pl. V, fig. 2). Ces arasements pourraient être ceux de caves-magasins ou plutôt ceux d'un cimetière collectif d'époque hellénistique. Les pièces, en fait, étaient quasiment vides, et ceci depuis longtemps (sépulture bédouine ou clandestine en surface). Des amulettes et autres menus fragments, trouvés presque sous le sol superficiel, notamment dans les ravines d'érosion (nahr) semblent avoir été charriés des maisons formant les parties hautes du Kôm Blayboy. L'existence dans ce secteur d'un cimetière pourrait être indiquée par la trouvaille presque en surface, d'un morceau de grand *oushebti* privé, datable des IVe - IIIe siècles av. J.C. (pl. VII, fig. 3). A l'intérieur de certains "puits", les sondages en sous sol ont été faits, descendant en un point

(Chambre IIc) jusqu'à 7 m. de profondeur (soit environ 4m. audessus de l'eau). Ces sondages ont montré l'existence d'au moins cinq niveaux de constructions marqués par des murs et des *maziaras* (voir pl. VI, fig. 1). Les couches hautes de ce terrain qui se prêtera à une bonne étude stratigraphique, ont livré un choix d'amulettes de faïence attribuables à l'époque ptolémaïque et aux siècles immédiatement antérieurs, notamment une grande "égide" ornées de la tête de Mout léonine (pl. VI, fig. 2). Un niveau moyen a rendu une image féminine de terre cuite, fort peu égyptienne de facture et dont l'origine et la datation posent un problème (pl. VII, fig. 1) ; une figurine royale de faïence, au même niveau, ne semble pas antérieure à l'époque libyenne (pl. VII, fig. 2).

L'équerre que forme au S-W le mur du bâtiment de surface laissait un espace libre où nous avons fouillé un amas de poteries brisées, de cendres et autres rebuts rejetés peut-être des édifices formant les couches supérieures du Kôm Blayboy. C'est dans ce dépotoir qu'ont été découverts les morceaux d'un objet rituel très remarquable dont la photographie paraîtra dans le *C.R. des Fouilles et travaux* publié par J. Leclant dans *Orientalia* 1970. Il s'agit d'un brasero circulaire reproduisant en terre cuite grossière, l'aspect d'un fourneau portatif de métal, avec ses clous de fixation et ses poignées (diamètre, env. 66 cm.). Sur le pourtour, à chacun des quatre points cardinaux, l'image d'un barbare barbu et ligoté est modelé en un fruste haut-relief de style égypto-hellénistique. Nous avons rencontré ainsi, en original, un de ces fourneaux qui servaient à la crémation de figures de cire, conformément à ces pratiques d'envoûtement, dirigées contre les ennemis des quatre coins du monde, qui sont bien connues des textes rituels d'époque tardive.

La campagne suivante devra comporter l'élargissement en surface et le dégagement systématique en profondeur, de la zone reconnue grâce au sondage III - 1969.

La possibilité que nous avons eu en 1968-1969 de demeurer près de trois mois sur le terrain a permis d'éprouver avec succès le courage et le soin de quatre jeunes assistants, de former de bons ouvriers et de déterminer certaines méthodes dans la fouille des murs de briques en terrain de limon humide.

Compte tenu des moyens limités dont nous disposions et de la multitude des tâches - implantation, relevé topographique, classements, recherches muséographiques - qui nous incombent, il semble que les résultats obtenus sont plus qu'encourageants.

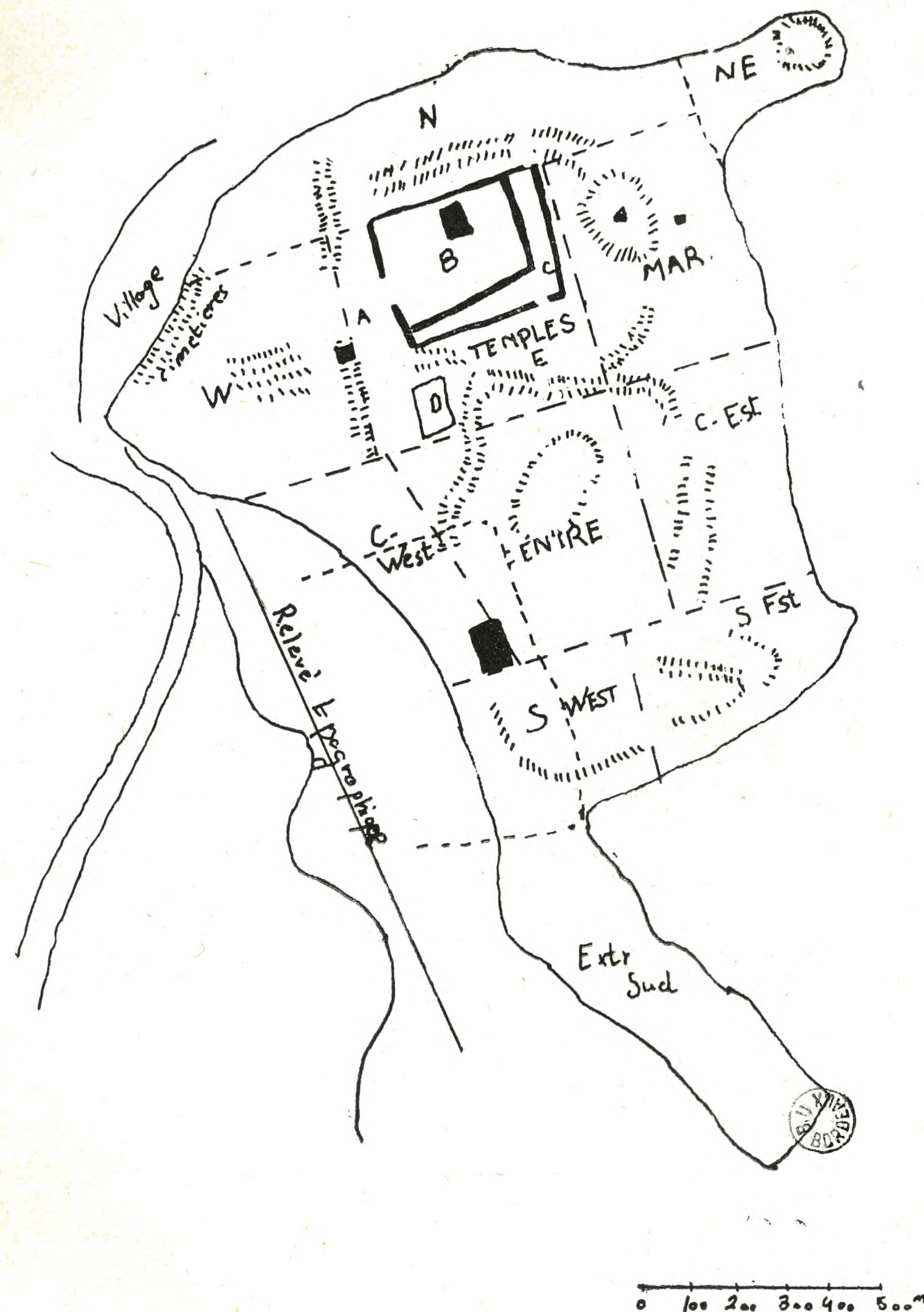
Monsieur François PUAUX, Ambassadeur de France et M. Jean-Louis MARFAING, Conseiller culturel, sont venus visiter le site et nos installations le 16 mars 1969.

P.S. Le Service des Antiquités nous a informés et a confirmé qu' "étant donné la situation", l'autorisation de fouilles était provisoirement suspendue. Il importerait au moins que l'équipe de la Mission française des Fouilles de Tanis ne renonce pas, après avoir remis résolument en train les recherches sur Tanis.

Il importerait qu'elle puisse en finir au plus vite avec la mise en ordre des *Archives de la Mission Montet*, indispensable pour une poursuite fructueuse et honorable de fouilles *in situ* et elle devra poursuivre dans les meilleures conditions la besogne de "rattrapage" entreprise au Caire, en coopération avec le personnel du Musée des Antiquités égyptiennes.

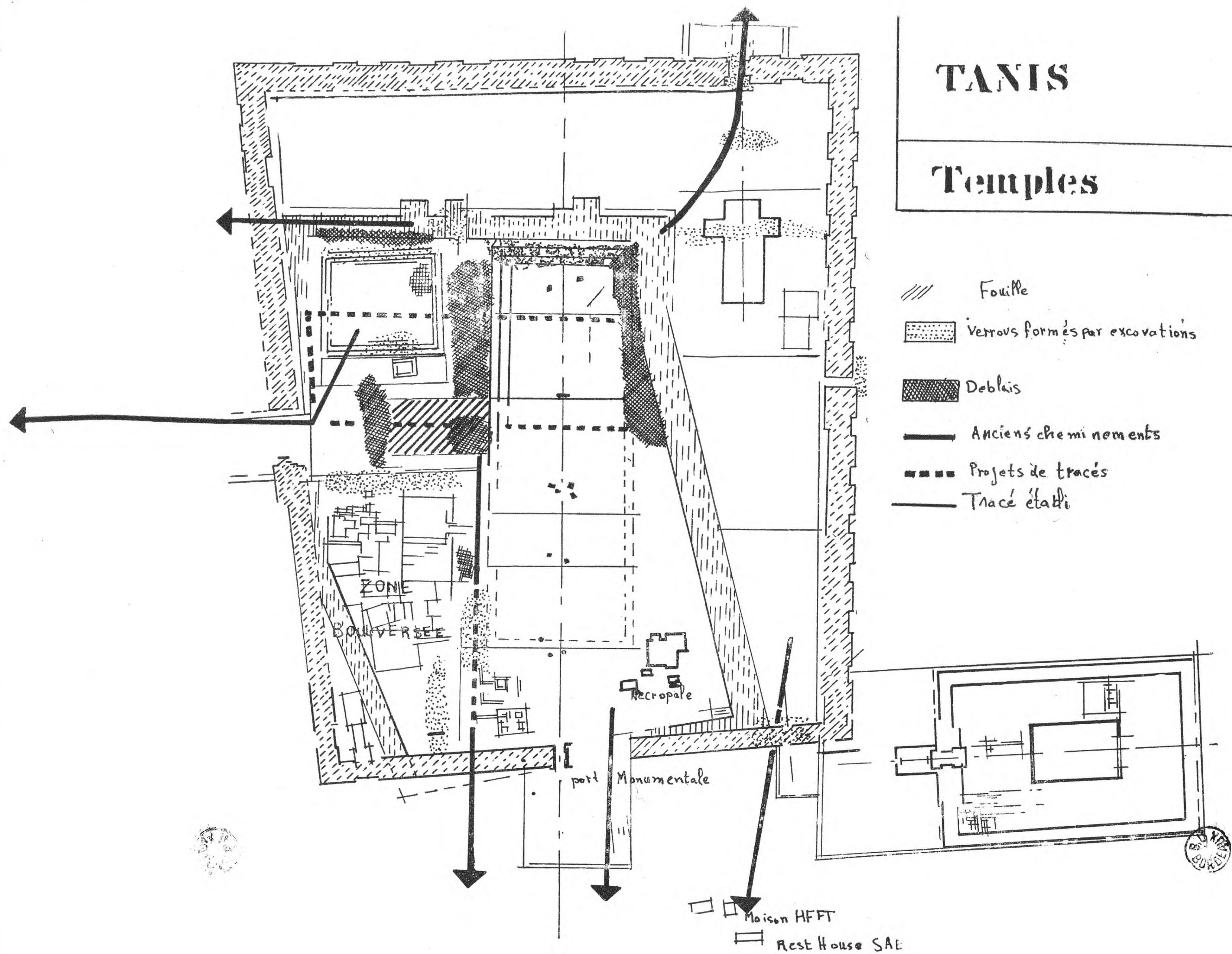
Le compte rendu des *Travaux faits par la M.F.F.T. en 1968-1969* aura été présenté devant l'Académie des Inscriptions et Belles Lettres dans le 1er trimestre de 1970.

JEAN YOYOTTE
20 octobre 1969.



TELL DE SĀN DECOUPAGE n° 9311 **TANIS**

SILE DES TRAVAUX DE LA XXIV CAMPAGNE


TANIS
Temples
Fouille
Verrous formés par excavations
Deblais
Anciens cheminements
Projets de tracés
Tracé établi
ZONE
BOULVERSEE
Necropole
port Monumentale
Maison HFFT
Rest House SAE

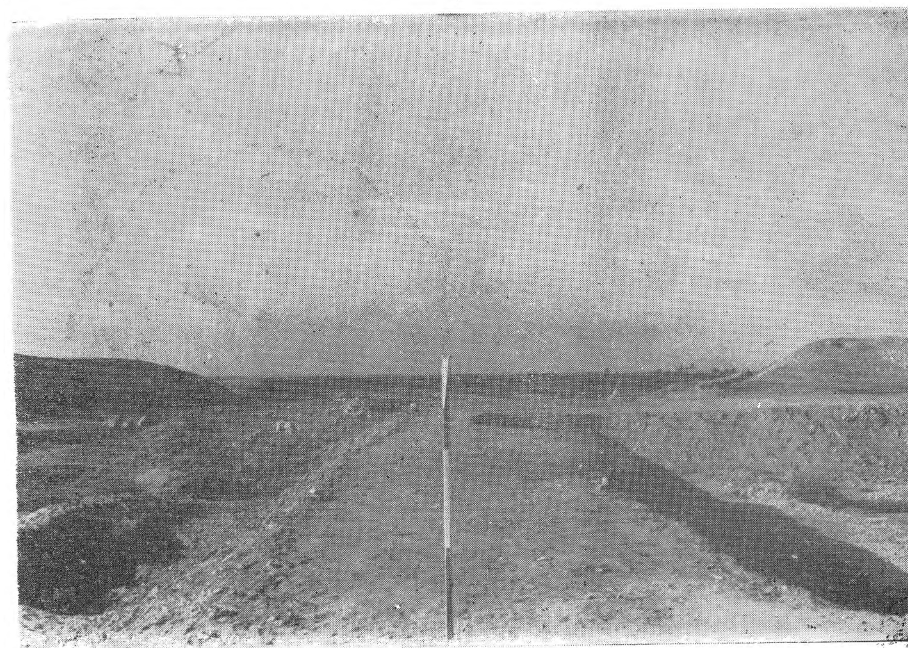


Fig. 1.—*L'aire du Secteur du Temple de Khonsou, en date du 4 février 1969. Vue prise du Sud.*

Le nettoyage de contrôle de la portion centrale du Temple de Khonsou – rapidement fouillé par la Mission Montet en 1951 – et l'enlèvement des gros tas de déblais au N. de cette aire est en train de permettre l'aménagement d'une large voie d'évacuation, qui desservira les parties centrale et orientale du Temple d'Amon, par la Porte du Nord (qu'on voit au second plan).

(*Nég. M.F.F.T.*, Ch. 972).



FIG. 2.—*Fouille systématique de la partie postérieure du Temple de Khonsou, Carré H. 6, le 25 février 1969*, vue prise du S.E.

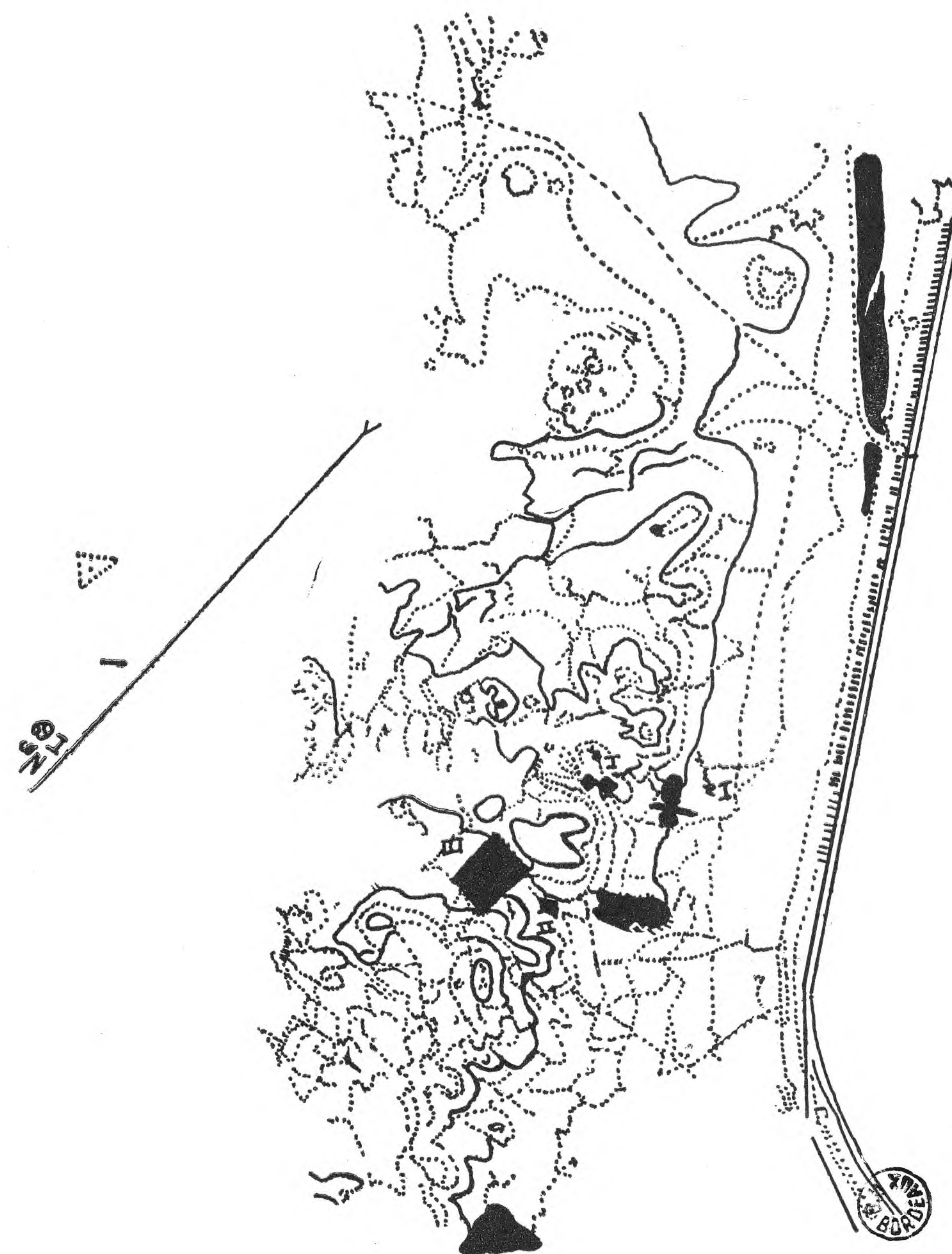
Comme l'emplacement du pylône et la partie médiane de l'édifice, la partie postérieure où devait se trouver le sanctuaire a été radicalement démolie, sans doute au Bas Empire, par les chaufourniers et marbriers. Sur la gezira de sable vierge – donc au niveau du soubassement de calcaire dont quelques blocs épars gardent le souvenir,–deux débris, laissés par cette exploitation sauvage, de monuments dont P. Montet avait déjà recueilli des fragments épars en 1951 :

(*a*) à notre gauche un gros morceau du naos monolithe de basalte dédié par Nectanébo II dans le temple.

(*b*) à notre droite un morceau caractéristique d'une statuette de granit gris montrant Ramsès VI agenouillé (Inv. S.A.E. San 69-370).

(*Nég. M.F.F.T.* Ch. 1058).

Pl. IV



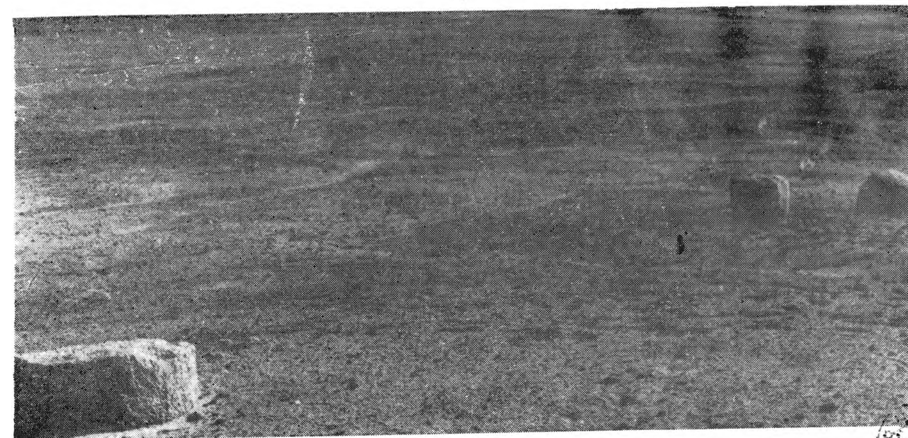


Fig. 1.—*L'emplacement choisi pour le sondage* 1969 – *III, au bas de la pente S–E du "Kôm Blayboy"*. Vue prise du N.O., 4 janvier 1969.

Dans le lointain, le Quartier de l'Extrême-Sud (Tell Abou Lelouq) : on entrevoit, sur notre droite, une ligne de déblais marquant l'emplacement du sondage S.A.E 1961-1962, qui avait permis de repérer, sous la surface les vestiges de tombes des époques ptolémaïques et romaines.

Au second plan, le plateau du Quartier Sud-Ouest : des tâches sombres dans toute cette aire dessinent en surface le plan d'édifices enfouis.

Au premier plan, trois gros morceaux de granit rose, tronçons découpés dans des colonnes de Ramsès II et, semble-t-il, abandonnés là par des carriers d'époque médiévale ou moderne.

(*Nég. M.F.F.T.*, Ch. 701).

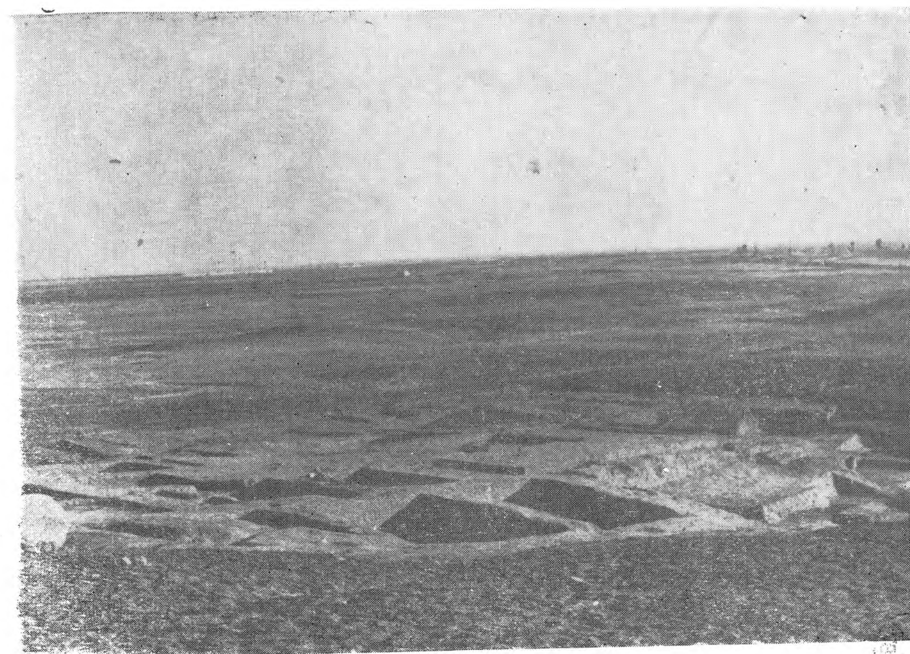


FIG. 2.—*Les arasements de bâtiments dégagés sous la surface lors du Sondage* 1969 - *III*. Vue prise de l'o.-N.O. 25, janvier 1969.

Ce bloc de chambres rectangulaires de grosses briques crues, plus ou moins profondément arasées par le ruissellement, pourraît être, soit les caves d'un immeuble, soit plutôt les restes radicalement pillés d'un cimetière collectif d'époque lagide. Le bâtiment s'étend encore plus ou moins vers le N. et l'E. Son mur extérieur O. forme un angle rentrant laissant un espace vide, où des jarres abandonnées, une grande abondance de tessons et des cendres formaient un dépot confus. C'est là que seront trouvés, le 27 janvier les débris du fourneau de sorcier.

(*Nég. M.F.F.T.*, Ch. 890).

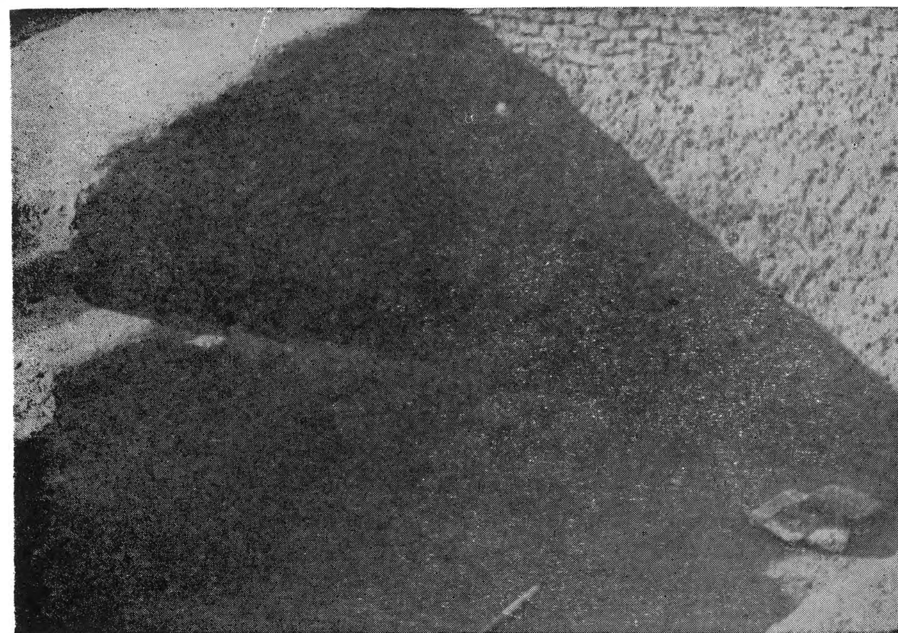


Fig. 1.—Sondage 1969 - III : sondage en profondeur dans le sous-sol de la *chambre* 16 *e*, état au 8 mars 1969, vue prise du S.E.

En haut, les arasements de la chambre : remodelé en surface le passage d'une ravine d'érosion, le mur de briques crues état fondé sur la pente, concordante avec le relief actuel, d'une épaisse colline de terre recouvrant un premier niveau d'habitation marqué, ici, par une *mazîara* en place.

(*Nég. M.F.F.T.*, Ch. 1160).



Fig. 2.—L'"égide" (Inv. SAE San 69 -558) a été trouvée dans le sous-sol de la chambre 16 e, le 12 mars 1969, dans le deuxième niveau. Cette belle amulette, d'un type qui reproduit l'aspect du "collier-à-musique", servant à apaiser la déesse dangereuse est en l'occurence consacrée à Mout (déesse léontocéphale coiffée du pschent). Sa date entre l'époque libyenne et l'époque ptolémaïque devra être précisée.

(*Nég. M.F.F.T.*, Ch. 1465).

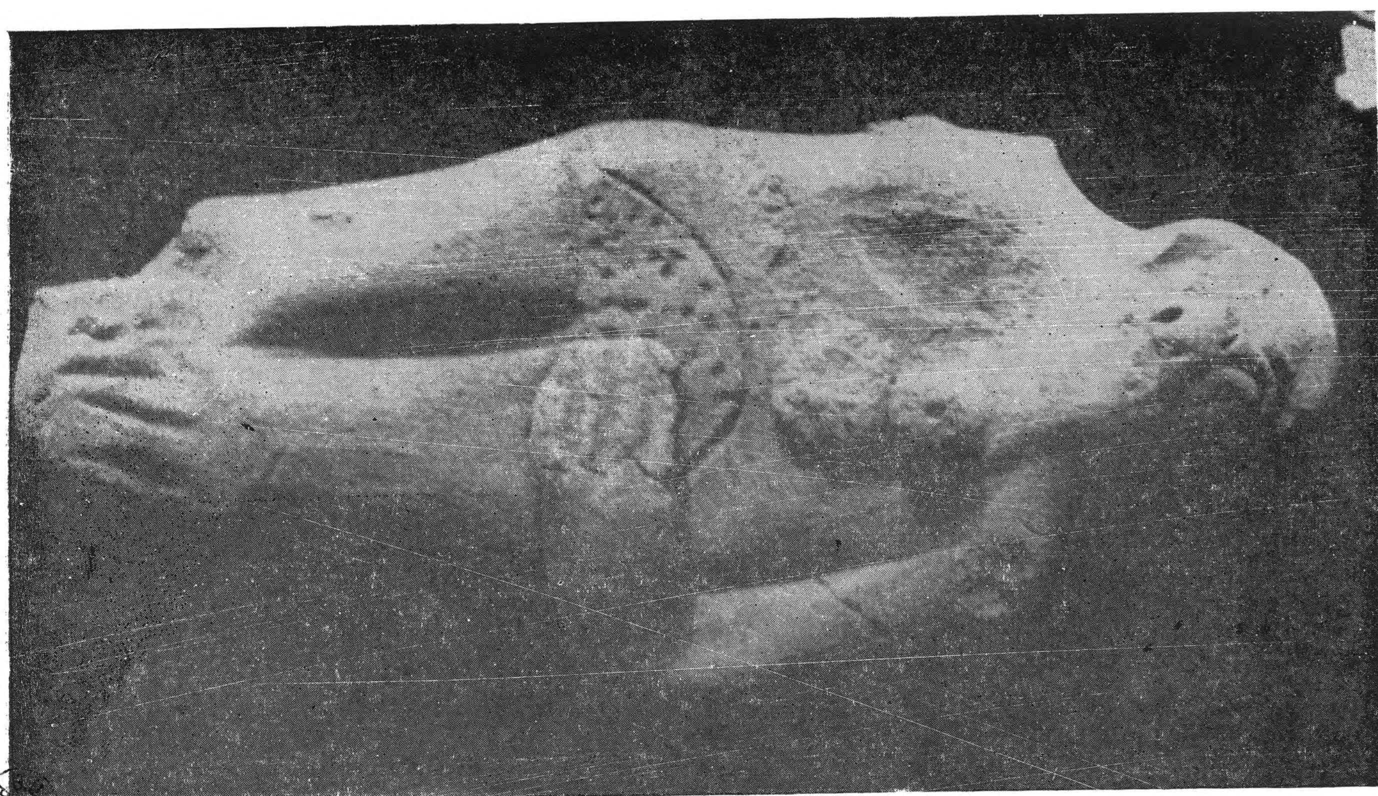


FIG. 1.—*Figurine de terre cuite d'une "Vénus barbare"* (*Inv.* SAE San 69 - 428). Grandeur nature.

Trouvée au Sondage 1969 - III dans les terres recouvrant le niveau moyen du sous-sol de la chambre 11c (le 5 mars 1969).

Le sol de Tanis n'a jamais rendu de figures semblable, et cette idole, si peu pharaonique, ne paraît pas un produit de l'art populaire égyptien. Une origine palestinienne n'est pas exclue.

(*Nég. M.F.F.T.*, Ch. 1431).

Pl. VII (*a*)





Fig. 2.—*Fragment d'une figure divine*, faïence égyptienne (Inv. SAE San 69-429). Grandeur nature.

Trouvée au Sondage 1969 – III dans les terres recouvrant le niveau moyen de la chambre 11c (le 5 mars 1969).

Datable de l'époque libyenne ou saïto-perse, elle appartient à la même couche que la "Vénus barbare".

(*Nég. M.F.F.F.*, Ch. 1432).

Fig. 3.—*Torse d'une grand oushebti* au nom d'un certain *Es-nehemtaouay* (?) (Inv. SAE San 69-487).

Trouvé presque en surface, le 10 mars 1969, sur les arasements de maisons sur le bord N.O. du sondage 1969 – III, cet oushebti, ramassé hors contexte, daterait d'après son type et son épigraphie, des dernières dynasties indigènes ou du début de l'époque lagide (IVe – IIIe siècle).

(*Nég. M.F.F.T.*, 1448).

ELEPHANTINE. BERICHT ÜBER DIE 1. UND 2. GRABUNGSKAMPAGNE

Von

Werner Kaiser

In den Ruinen des alten Elephantine sind bereits 1906-09 sehr umfangreiche und nahezu den gesamten Kom umfassende Grabungen der Königlichen Museen Berlin und der Académie des Inscriptions et Belles Lettres durchgeführt worden, leider besonders in letzterem Fall ohne entsprechend ausführliche Publikation [1]. Dasselbe gilt für die Grabung des Päpstlichen Bibelinstituts im Jahre 1918 [2] und gegenwärtig auch noch die verschiedenen Arbeiten des Service des Antiquités, die u.a. zur Freilegung des Hekaib-Heiligtumes geführt haben [3]. Das Schweizerische Institut für Ägyptische Bauforschung und Altertumskunde andererseits konnte für seine eingehende Untersuchung der spätzeitlichen Tempelanlagen des Chnum und der Satet im Jahre 1958 wegen der gleichzeitigen Rettungsaktion in Nubien nur Säuberungen und kleine Sondagen durchführen [4].

Unter diesen Umständen waren die ersten beiden Kampagnen, die das Deutsche Archäologische Institut zusammen mit dem Schweizerischen Institut 1969 und 1970 in Elephantine durchgeführt hat [5], zunächst vor allem auf eine Klärung

---

(1) Vgl. für die deutsche Grabung Honroth, Rubensohn und Zucker, ZÄS 46 (1909/10) S. 14 ff., für die französische Comptes Rendus des Seances de l'Académie des Inscriptions et Belles Lettres 1908 S. 201 ff., Lagrange, Revue Biblique 1908 S. 206 ff., Chabot, Journal des Savants 1944 S. 87 ff., 136 ff.

(2) Strazzuli, Bovier-Lapierre und Ronzevalle, ASAE 18 (1919) S. 1 ff.

(3) Bis zur Vorlage der Veröffentlichung von L. Habachi vgl. bes. ASAE 55 (1958) S. 176 ff., Archaeology 9 (1956) S. 8 ff.

(4) Ricke-Sauneron, Beiträge Bf. 6 ; ebd. S. 2 f. auch Überblick über die Grabungsgeschichte von Elephantine ; vgl. ausserdem bes. Kraelig, Brooklyn Museum Aramaic Papyri S. 7 ff.

(5) Januar-Mai 1969 und 1970. Teilnehmer waren die Ägyptologen W. Kaiser und R. Stadelmann, die Architekten G. Haeny, P. Grossmann, H. Jaritz und H. Fenner (2. Kampagne), die Kartographen J. Dorner und H. König (beide 1. Kampagne), der christliche Archäologe T. Ulbert und der Prähistoriker V. Vogel (beide 2. Kampagne), D. Johannes als Photograph, W. Ruhm als Zeichner (2. Kampagne), die Studenten G. Burkard und K. Martin (beide 1. Kampagne) sowie J. Eiwanger (2. Kampagne). Der Service des Antiquités war 1969 durch Abd el-Halim Rizk und Mustafa el-Zairy, 1970 durch Said Hindi vertreten. Ihnen wie allen anderen zuständigen Stellen des Service des Antiquités sind wir für stete Hilfsbereitschaft und freundlich gewährte Unterstützung zu besonderem Dank verpflichtet. Vgl. auch die Vorberichte in MDIK 26 (1970) und 27 (1971).

und gegenseitige Verbindung der älteren Grabungsbefunde ausgerichtet, um für die weitere Fortsetzung der Arbeiten festere Ausgangspositionen zu gewinnen. Das Schwergewicht lag dabei im Bereich der beiden Tempel der 30. Dyn. - Römerzeit und ihrer unmittelbaren Nachbarschaft. Weitere Untersuchungen wurden an drei Stellen des südlichen Komgebietes durchgeführt. Für den Gesamtbereich der Stadt ist ausserdem eine kartographische Aufnahme im Masstab 1 : 500 in Angriff genommen worden.

Im einzelnen wurde unmittelbar vor dem Chnumtempel in einer Breite von ca. 35 m die Abfolge der Stadtmauern seit der Zeit des AR freigelegt. Zwischen dieser und dem Fluss kamen weiterhin die Reste einer mächtigen Sandsteinmauer zu Tage, die am Wasser rechtwinklig nach Nordosten umbiegt und zusammen mit der weiter nördlich schon immer sichtbaren Uferbefestigung ("Qai") offenbar Teil einer grossen, hochgelegenen Uferterasse war, die in römischer Zeit über alle älteren Bauten hinweg unmittelbar vor den Pylontürmen des Chnumtempels angelegt worden ist. Am Südostfuss dieser Terrasse wurde ausserdem ein steingefasstes Wasserbecken von ca. 8 × 12 m Umfang mit zwei Treppen und mehreren Wassermessern entdeckt. Nach baulichen und inschriftlichen Hinweisen scheint seine Anlage bis in die ptolemäische Zeit zurückzugehen.

Im Chnumtempel selbst wurden die Fundamente des nördlichen Pylonturmes römischer Zeit freigelegt. Weitere und für die Rekonstruktion des Tempels der 30. Dyn. wichtige Fundamentreste sowie ein kaum beschädigter Granitnaos von über 4 m Höhe kamen im rückwärtigen Tempel zu Tage. Zugleich wurden die Einbauten koptischer Zeit im römischen Vorhof des Tempels eingehend untersucht. Dabei konnten u.a. die Reste einer kleinen, als Zentralbau mit Winkelpfeilern angelegten Kirche etwa des 7./8. Jahrhunderts festgestellt werden. Da die gesamte Anlage weitgehend einheitlich geplant erscheint, ist nicht auszuschliessen, dass es sich dabei um das von Abu Salih für Elephantine erwähnte Kloster handelt.

Weitere bereits seit 1906–90 freiliegende Wohnbauten spätantiker Zeit wurden im rückwärtigen Tempelteil, entlang

der westlichen Ziegelumfassungsmauer und im Bereich südlich des Tempels aufgenommen. In tieferen Schichten des letzteren Gebietes kamen ausserdem erstmals Wohnbauten einer deutlich anderen Orientierung und wohl vorptolemäischen Datierung zu Tage.

Sowohl im Bereich des Chnum- wie des Satettempels wurde mit der Aufnahme der zahlreichen wiederverwendeten Bauteile älterer Vorgängerbauten begonnen. Aus den rückwärtigen Fundamenten des Satettempels hat bereits die französische Gruppe 1906–09 etwa 100 relieferte Blöcke von Bauten des MR, NR und der 26. Dyn. herausgehoben, die zum Teil in das Kairiner Museum und den Louvre gelangten, zum Teil heute noch im Hof des Antikenmuseums von Elephantine lagern. Ihre eingehende Untersuchung führte zu dem Ergebnis, dass zumindest für den Satettempel der 18. Dyn. eine Rekonstruktion grosser Wandflächen oder sogar des Gesamtgebäudes nicht ausgeschlossen erscheint. Noch in der 1. Kampagne wurde daher die Herausnahme weiterer Blöcke begonnen, wodurch die Gesamtzahl von dekorierten oder architektonisch wichtigen Steinen des MR-Tempels inzwischen auf ca. 50, die des Tempels der 18. Dyn. auf ca. 260 angewachsen ist.

Die Untersuchung der z.T. auch in den Farben vorzüglich erhaltenen, qualitätvollen Blöcke ist noch im Gange. Als sicher kann bereits gelten, dass der Tempel der 11. und der 12. Dyn. in der 18. Dyn. abgebrochen und in der Neuanlage der Hatschepsut ein erstes Mal wiederverbaut worden ist. Das neue, von Thutmosis III. vollendete Heiligtum war offensichtlich ein Baldachintempel mit Pfeilerreihen auf allen vier Seiten. Die bisher rekonstruierbaren Wandflächen zeigen neben Satet vor allem Anuket und weiterhin Chnum und Amun. Neben Szenen des üblichen Inhalts ist u.a. die Darstellung einer Nilprozession bemerkenswert, bei der die beiden Götterbarken von Nachen mit Sängerinnen und am Ufer von weiteren Teilnehmern begleitet werden.

Im sehr stark durch Sebachin zerstörten Südteil der Stadt wurde mit der Untersuchung des grossen Reststückes der Stadtumwallung in der Südwestecke begonnen. Die

bisherigen Ergebnisse deuten darauf hin, dass in dem mehrfach verstärkten Mauerstück keine Reste der älteren and ältesten Stadtmauer erhalten sind. Andere, weiter östlich angesetzte Untersuchungen haben den Eindruck verstärkt, dass zumindest die Stadt des AR nur das östliche Drittel des spätzeitlichen Elephantine eingenommen hat (1).

In der Südostecke des Stadtgebietes wurde nahe dem Fluss eine grössere, ebenfalls bereits stark von Sebachin zerstörte Fläche bis auf den gewachsenen Fels freigelegt, um für den Grabungsschutt einen Ablageplatz zu schaffen. Dabei fanden sich Teile der Stadtmauer des AR, einfache Hüttenreste und zuunterst Spuen prähistorischer Besiedlung. In einem ehemaligen Strudeltopf kamen ausserdem die Reste von acht Skeletten, Scherben und einige erhaltene Gefasse aus Ton und Stein zu Tage, die auf eine Datierung in die späte Naqada-Kultur weisen.

Unter den Einzelfunden sind zunächst die Teile von zwei Toren zu erwähnen. Im einen Fall handelt es sich um 11 Blöcke eines Intercolumnartores mit Darstellungen und Inschriften Nektanebos' I., von dem bisher eine Bautätigkeit auf der Insel nicht belegt gewesen ist ; die Steine waren in der Südwestmauer der grossen römischen Uferterrasse des Chnumtempels verbaut ; das Tor scheint zum älteren Chnumtempel gehört zu haben. Die 12 Blöcke des zweiten Tores kamen, gleichfalls verbaut, im Süden der Stadt zu Tage (2) und sind offenbar Teile eines über 4 m hohen Durchganges durch eine Ziegelmauer, der nach den Inschriften und Darstellungen von Amenophis II. errichtet worden, aber zumindest bis Ptolemaios I. in Benutzung gewesen ist.

Im Schutt vor dem Chnumtempel kam eine ursprünglich über 2 m hohe Stele Sethos' I. zu Tage, die ein erstes Mal bereits von Champollion gesehen und kopiert worden ist, damals aber noch im Eingangsraum des Nilometers verbaut

(1) Vgl. auch die Aufdeckung von Gräbern in einer Tiefe von 4 m ein Stück südlich des heutigen Dorfrandes während der Grabung des Bibelinstituts (ASAE 18 (1919) S. 5). Noch weiter südlich haben sich in den Siedlungsschichten des Stadt u.a. Bruchstücke von tönernen Opferplatten der 1. Zwischenzeit bzw. des MR gefunden.

(2) Vgl. bereits Ricke, Beiträge Bf· 6 S. 14.

war (1). Als Fundamentierung einer Ausbesserung der Stadtmauer etwas weiter südlich fanden sich die Blöcke von vier grossen Sandsteinaltären, die ursprünglich wohl im Tempelhof des Chnum gestanden haben und Weiheinschriften der griechischen Stadtkommandanten aus der Zeit Ptolemaios' VI. und VIII. tragen (2).

Aus den übrigen Funden ragt das Kopffragment einer etwa lebensgrossen Serapis statue aus schwarzem Granit hervor, die nach dem Stil und der Qualität der Arbeit in der späteren Ptolemäerzeit entstanden sein dürfte. Daneben ist der Torso einer kleineren Granitstatue Amenophis' II. und einer fast lebensgrossen Statue Ramses' II. aus gelbem Sandstein zu nennen. Die Papyrusfunde waren insgesamt bisher relativ spärlich. Von den über 500 aufgefundenen Ostraka ist das meiste nur fragmentarisch erhalten. Der weitaus grösste Teil trägt koptische Beschriftung.

Die bisherige Bearbeitung des reichen Keramikmaterials hat zu einer ersten Gliederung für die späteren Perioden geführt. Bemerkenswert ist u.a., dass die Funde von Keramikstempeln die Herstellung von Imitationen spätantiker Sigillata in Elephantine bezeugen.

Werner Kaiser

(1) Not. Descr. 1 S. 223 ff.

(2) Für den Typ dieser bis 1,6 m hohen Altäre mit Éckaufsatz vgl. Roeder, Debod bis Kalabscha S. 175, 179, Taf. 68 111e und 111h ; Dakke S. 65 und Taf. II ; ferner Lefebre. Petosiris I S. 13 f. mit Abb. 2 ; II Tfa. V.

POLISH EXCAVATIONS AT KÔM EL-DIKKA IN ALEXANDRIA

in 1965 and 1966

PRELIMINARY REPORT*

BY

WLADYSLAW B. KUBIAK ELZBIETA MAKOWIECKA

The discovery and partial unearthing, in the course of the 1964 excavations, (1) of the ancient building, comprising a theatre-like auditorium and considered to be one of the most important achievements of classical archaeology in Egypt, influenced the program of Polish research in the area. It was necessary to limit the actual work to the southern confines of the Kôm where the "theatre" is situated. Thus, sector M of our excavations became the main dig during the last two years. In addition, only two other smaller sectors, A II and C VI, (2) situated in the vicinity of the baths in the North part of the hill, have been systematically excavated. Both were cases of emergency digging executed to prevent the collapse of underground vaulted constructions discovered by former soundings.

Field work has been carried out almost uninterruptedly during the whole period covered by the present report (3).

---

* The research has been conducted by the Polish Centre of Mediterranean Archaeology in Cairo, directed by Prof. Kazimierz Michalowski. The Field Work at Kom el Dikka during that period, as in 1963 and 1964 was directed by Dr. Wladyslaw B. Kubiak. For previous reports see: L. Dabrowski, Polskie wykopaliska w Aleksandrü, *Problemy*, Nr. 2, Warszawa 1962; J. Lipinska and H. Riad, Trial pits at Kom el Dikka in Alexandria *ASAE*, LIX (1966); J. Lipenska, Polish Excavations at Kom el Dikka in Alexandria, *Travaux du Cenre d'Archeologie Med. du A.P.S.*, t. 3, 1966.; W.B. Kubiak, Les fouilles polonaises à Kom el-Dick en 1963 et 1964, *Bull. Soc. Arch. d'Alexandrie*, t. 42, 1967. The first part of this Report has been prepared by W.B. Kubiak, the second one mainly by Miss E. Makowieka, a classical archaeologist and chief site supervisor during the 1965 and 1966 seasons. All the plans have been drawn by A. Ostrasz, chief architect during the same seasons. Epigraphical material will be published separately by Z. Borkowski.

(1) See W.B. Kubiak, *op. cit.*, pp. 77-80 and Pl. VIII-IX.

(2) For the general situation of particular sectors and soundings see Plan I. Sector A II. is the north-eastern prolongation of A.

(3) That is from November 1, 1964 until the end of October, 1966.

The labour force varied from 30 to 120 workmen. The Alexandria Governorate and the Antiquities Department provided the Mission with the greater part of the diggers (1).

Roman and Early Christian Period

Sector M

The digging area here covers nearly 2000 square metres, and more and more evidently takes the shape of a huge oval stretching some 70 m. . along its longer E–W axis. The ovoid outline of the dig is determined partly by the roughly semi-circular shape of the external wall of the excavated monument, partly by the need for temporary public exhibition (2). Fortunately, most of the digging is through the single, uniform, very thick upper stratum. This favours the execution of the exhibition project, and on the whole, does not contravene archaeological principles.

The depth of excavation is determined by the level of occupation (or rather by the walking-level) inside and outside the uncovered constructions. In sector M this is about 7.5 m. above the mean sea-level, being equivalent to a digging depth of about 10 m. In a few small areas, however, deeper excavating was necessary.

Digging below the principal level of occupation (taking as starting point the level corresponding to the later theatre orchestra pavement) proved useful at certain points in order to clarify particular problems involving the history and dating of the monument.

(1) We have great pleasure to express our deepest thanks to the late General Director of the Antiquities Department, Mr. Moh. Mahdi, and our local collaborator, the Director of the Graeco-Roman Museum, Dr. Henri Riad, who have always paid full attention to the needs of archaeological research in the area.

(2) Bearing in mind the touristic value of the discovered monument, both the Department of Antiquities and the Polish Centre of Archaeology in U.A.R. decided to make it accessible to the public within the shortest possible time. Accordingly, plans have been made to display it even before the whole area of the hill is fully excavated. General lines of the project prepared by Mr. Antoni Ostrasz and Mr. W. Kolataj, architects of the mission, are : the shaping of the high surrounding terrain of the theatre into a kind of bowl sloping to floor level and giving easy and safe access to the monument and, at the same time, a wide perspective. Present digging is already an initial step towards the realisation of the project. Simultaneously, the necessary repairs and restorations are also going on. Report on the restoration and reconstruction of the monument will be presented separately.

The deepest of these soundings was made in the western part of the area, slightly south of the central axis of the theatre and west of the so-called West Wall (See plan I). This wall most certainly constituted, at one period, the western façade of the theatre. In its central stretch, that is west of the entrance hall, it was later dismantled almost to the ground, leaving nothing but a sort of threshold slightly raised above the pavement. The sounding was an attempt to lay bare the foundation courses of the wall and establish its date. It measured 2×3 m. and reached the depth of 5 m. which is equivalent to c. 2.5 m. above mean sea level. At the bottom of the trial pit, i.e. at the foot of the West Wall, a pavement of limestone slabs was found laid over a layer of clay. A limestone wall, c. 0.7 m. thick, made of blocks of varying dimensions, perpendicular to the West Wall, was found preserved up to a height of 1.7 m. Both the pavement and the wall were cut across the foundation trench of the West Wall Thus they were part of some building already disturbed when the West Wall was constructed. The filling material around these constuctions was comprised of limestone rubble, a little crushed brick and some dark claylike earth – the usual fill of the lower strata of the Kôm – and also an unusual quantity of broken marble as well as bits of pavement-mosaics. These were of fairly large (3–4 cms. diam.) and irregular pieces of marble or alabaster set in a thick coat of pink mortar. Pottery sherds were not numerous, mainly fragments of coarse, utilitarian, undecorated vessels of a dark rust-brown ware. Two terra sigillata sherds imply an early Roman date for the fill. The West Wall foundation trench cut right through this layer. Its filling extends to the pavement from which the digging started. This proves first that the preserved part of the West Wall (almost 5 m. high) nearly entirely constituted its underground part, (see Pl. IX 1) and second that its building started from a level not very much lower than the outer pavement in front of the theatre. This pavement existed up to early Arab times.

The West Wall, both north- and southward, extends past the semicircular wall which formed the outer wall of the theatre both in Period II and Period III of its utilisation. This allows us to suggest that in Period I the theatre might

have been larger, with several concentric walls supporting the auditorium. This theory will be examined later, nevertheless I should like to mention here that in the N part of sector M 6, north of the NW corner of the building, the West wall has a branch, turning off to the east. The branching wall itself must have once constituted a massive *opus emplectum* structure of which the nucleus alone remains, irregular stones bound with grey ashy mortar, on the solid substructure made of limestone blocks. The preserved part at the corner measures ca. 2 × 2 m. With the facing that has not survived, the whole construction must have been about 3 m. thick. The exact function of this, in relation to the other structures, cannot possibly be defined until the excavation is further extended to the north. From the technical point of view, the masonry is more similar to that of the semicircular wall of the theatre than to that of the West Wall, built in a kind of *opus quadratum.*

The ground westward of the wall, i.e. outside the area occupied by the theatre in late Roman and early Christian times, was entirely paved with limestone slabs of different sizes, laid down in straight rows. A sounding has shown the substructure of the pavement to have been ca. 0.5 m., a thick layer of crushed limestone and mortar.

The second place where digging was carried out below the theatre floor level was in the west part of sector MXI (See plan I). The area of the deeper excavations covers here ca. 8 × 8 m. and lies north of the outer semicircular wall. The level of occupation here was not clearly defined, in contrast to what occurred on the theatre's western side. There was only a thin layer of compact earth with rubble, crushed mortar and ash beaten into it, corrsponding with the level of the threshold of the theatre's north entrance. This layer was neither thick nor compact enough to have been used for long. The area certainly lay off the front of the building in its III phase and was, obviously, not open to public use. Below this level, down to a depth of about 5.5 m. above mean sea level, nothing was found which could be regarded as the earlier occupation level, and nothing to correspond with the north entrance of Period II of the theatre. We may suppose that during the last re-modelling of the building,

the previous approaches from the North – including a possible pavement – were destroyed.

The lower filling contains nothing characteristic and, like the upper one, is a mixture of grey loose earth and rubble with pockets of ash and clay. Many sherds were found here, mostly from broken utilitarian vessels, mainly of large, late Roman and early Christian amphorae[1]. The absence of other finds does not allow more accurate dating.

Further soundings below the level of the orchestra floor were mainly intended to provide data on particular architectural problems and will therefore be more closely described in connection with these questions.

In the eastern part of sector M XI, about 0.7 m. above the threshold of the walled-in Period II north door and the level of occupation (there composed of the layer of earth and rubble already dealt with), we found the remains of a cylindrical kiln (Phot. Pl. V. 1). The lower part alone is preserved, made of fired bricks bound with a soft clay mortar. Two kinds of bricks were used to build it: the north part is of square, thin Roman brick, light-red, of well mixed clay, measuring 23 × 23 × 3 cms. One row of these goes to form the side of the kiln which is therefore 23 cms. thick. The other sides, i.e. west, east and south, are built of rectangular bricks of poorer quality, 23×12×5 cms, laid lengthwise. These sides of the kiln are therefore not more than 12 cms., thick. They are later than the first and seem to be for repairs, reducing the original diameter from ca. 1.30 to 1.15 m. The furnace, 35 cms. wide, was at the south side where two straight little walls jut 30 cms. out of the kiln side. We do not know how high the opening may have been, but it could not have been less than 38 cms., which is the actual height to which the kiln has been preserved. There were no foundations for this structure, and the first course of bricks was laid directly on the ground. The bottom part was filled with wood-ash and soot. The upper part, that is as far as the walls are preserved, was full of broken bricks mixed with clay, certainly

(1) Egyptian pottery of the Roman and Christian times has not as yet been systematically studied and published. The material from other Mediterranean sites provides, in many instances, grounds for approximate classification and dating. Especially useful is H.S. Robinson, *Pottery of the Roman Period, The Athenian Agora* V, Princeton 1959.

the crumbled part of the upper structure of the kiln. What was left of the kiln at the time of uncovering was filled to the brim and the surface had formed a stamped and compact claylike mass similar to that used as mortar for binding the brick-work. Possibly the good bricks were removed from the top of the kiln at some point and the clay was left.

Everything, the lack of foundations, the thin sides, the loose, crumbly clay used for binding, points to a jerry-built job that was not intended to be anything but temporary. Nothing that could have indicated its purpose was preserved. It might have been used for firing bricks. Even nowadays the fellah still uses the same method : a kiln built of mud bricks, purposely loosely bound with clay which is rather meant to seal openings than to hold the bricks together. A fire is kept burning until the bricks are baked (for this the thin sides of the kiln are most favourable) then the whole edifice is dismantled and the bricks used for building.

Although there is no direct archaeological proof for it, the kiln may be related to one of the re-modellings of the theatre during period III. Whatever the case may have been, it belongs to a time when the north door of period II was no longer used, and yet prior to building the latest (eastern) buttress of the outer wall. The lapse of time before the re-modelling of Period III must have been short, as the need for the buttress probably followed directly the construction of the heavy dome upon walls not strong enough to bear its weight without any support. Moreover, the two kinds of brick used in the kiln are similar to those used in Period III constructions (see bolow) and they are covered by the same greenish sediment. It is possible that it was used to provide the site with the necessary bricks. Other excavations at the Kôm have also yielded instances of building materials, particularly lime and brick, being directly produced on the building site [1]. The important deposit of pure clay found in the west part of sector M XI might also be related to this process of brick making.

[1] C.f. W. Kubiak, *op. cit.*, pp. 58-59.

Sector M XI is limited at the west by strange stone constructions (Photo Pl. V, 2 ; Pl. VI. 1), the west side of which springs from the same level as the orchestra, and the east side of which stands some 0.5 m. higher, yet even so, not uniformly, being ca. 0.5 m. higher at the north than at the south. These consist of two parallel stone walls, about 55 cms. thick, each comprising a row of slim pillars, carefully built of well-wrought and well-adjusted blocks 35 × 30 × 30 cms., jointed by a screen of smaller stones 25 × 15 × 15 cms., bound with ash mortar. These parallel walls were then joined by perpendicular walls, about 55 cm. thick, forming a row of rectangular cells with no internal communication or external openings (Pl. VI (b)). To the north the parallel walls are not connected with each other ; in a few places remains of older constructions were enclosed by the walls. This strange structure could only be explained as follows : fairly early, as far back as Period II of the theatre, the north and east expansions outside the outer wall were used as dumps for building and industrial waste such as rubble, sherds, ashes, etc. At the beginning, the fast accumulating mass was no nuisance, being behind the theatre. On the contrary, it was useful, buttressing the outer wall that already tended to lean. However, in time, the dumps grew too high and too steep, threatening the paved place in front of the theatre's façade. The constructions described above were built as a protection for the rubble-filled cells, acting as sandbags preventing the dump-heap from overflowing to the west. The top has been levelled, which shows in the sections both of sector M XI and ME, forming a vast terrace that probably extended as far as the cisterns and street [1]. The terrace lasted as long as the theatre itself and in the Arab period was once again used as a dump. That implies that by then the surrounding area had reached the level of the terrace, that is about 10 m. above mean sea level. Communication between the area in front of the theatre and the vast earth terrace behind was possible by means of the steps inside the north room adjoining the entrance hall.

[1] According to Mahmud bey's (Al Falaki) denomination. Cf. his *Memoire sur l'antique Alexandrie*, Kopenhagen 1872, Plan.



Sector ME East :

This trial pit is ca. 10×10 m. and lies 17 m. to the east of the outer wall of the theatre, approximately in line with its long axis. It is 11 m. deep, i.e. goes down to 6 m. above mean sea level and 1 m. below the orchestra level (Photo. see Pl. VI, b).

The bottom layer contains typical builder's rubble, probably left by the stonecutters who recut the older architectural elements. In the west part of this sector, beneath that layer, a well preserved pavement of nummulitic limestone slabs as well as various free-lying architectural details were unearthed (Pl. VII. 1) Further southwards a fragment of a column was found, 0.7. m. in diameter, standing 0.8. m. high on an octagonal base, both of soft limestone (Pl. VI, 2). Both appear to be *in situ*, standing on the aforementioned pavement. The surface of the column still bears traces of plaster, painted red imitating Aswan granite. Among the architectural elements, a fragment of a profiled lintel, a few cornice stones, a piece of Corinthian capital with vestiges of blue paint, etc. were found. All of these, as well as the builder's waste and a few whole stones, (c. 50 × 50 cm)., found with them, are of soft local limestone. Some of them bear traces of plaster facing and painting. Their size points to their having been a part of some vast construction. The scale and type of the elements found suggest an important building and, whether sacred or not, most probably public.

Above that, the filling extending up to about 6 m. consisted mainly of loose, light brown earth with a small content of organic matter, brick and limestone rubble, as well as small pieces of mortar and many small pieces of marble, but rather few pottery sherds of different types. Ash, dross, clean sea-sand and gravel also occur. The entire mass had been probably levelled, at about 11 m. above sea level. In section, the levelling is visible. This might have occurred at the time when the earth terrace north of the theatre building was fashioned (sector M XI, see above), as the level also suggests. However, only further excavations may provide full archaeological corroboration. Another similarly levelled layer appears about 3 m. higher.

Pottery sherds collected from the previously described area throughout the fill consist of fragments of various utility wares. There are numerous instances of ribbed Coptic amphorae, common even in early Arab strata up to the X*th* century [1]. In VI and VII century levels various shapes of vessels are represented with ribbings of varying width, from quite wide to a few millimetres. A few sherds with glossy coatings like Samian ware were also found. These were most common in the VI-IX century levels, but occurred both earlier and later too [2]. In the lower strata some examples of fine black-polished pottery were found which could be ascribed even to the Ptolemaic period, but were mixed with ordinary red wares.

Arab Period

Sector M :

The first witness of early Arab activity in the excavated sector M is the remains of the early Muslim necropolis. This is also true of other parts of the Kôm el-Dikka excavations. This earliest necropolis had come into being prior to the total destruction of the nearby Byzantine Building-with - auditorium [3] i.e. previous theatre. This however was disused by then.

The uncovered part of the necropolis contained 9 tombs. The graves were dug and constructed immediately opposite the façade of the building and against its front wall. The façade must have already been devastated and the paved area to the west of it abandoned. Yet the pavement had not been covered with soil and rubbish.

The tombs were very simple. Several slabs of the pavement were removed and longish, shallow pits were dug and lined with limestone slabs set vertically. The dimensions of the burial pits averaged 0.25 × 1.85 m. and were about

---

(1) Generally types as in W. Y. Adams, Introductory Classification of Christian Nubian Pottery, *Kush* X, 1962, fig. 7 P and 8. Types as those published by O. Wulff, *Altchristiliche und mittelalterliche Bildwerke*, Berlin 1909, p. 289 occured too.

(2) Types as in H. E. Winlock, *The Monastery of Epiphanius at Thebes*, Part I, New York 1926, fig. 37, pls. XXXI-XXXII.

(3) Calling the building in the last phase of its existance the "Theatre" would be anachronistic, so, until the studies are completed and its true purpose scientifically established, we prefer to name it "Building - with - auditorium".

0.35 m. deep. After the burial they were covered with similar slabs laid flat and supported on the edges of the side slabs (Pl. VII, 2). Mortar was used sparingly, and there was sometimes floor plastering inside. It was not possible to establish whether the burials were marked on the surface of the graveyard. This might have been done by small mounds of earth, the very earth that had been dug out of the tomb pit. The additional weight would have helped to seal the graves that were very loosely covered by their ill-fitting roofs and very close to the surface.

All the tombs examined contained single burials. Some of them were found with no cover and containing no skeleton. They must have been opened and cleared before the necropolis was abandoned and covered by accumulating rubbish. Possibly they had thus been prepared for new burials which never took place. Obviously, either the cemetery was suddenly deserted or the nearby ruins might have collapsed and buried it under a thick layer of rubble.

In the vicinity of the burying ground, viz. in both north and south-westernmost chambers in the passage encircling the auditorium, a great number of human bones were found. The deposit of crushed and decayed bones formed a blackish mass, 20 to 70 cms. thick, over the layer of loose, sandy grey earth containing a few architectural elements, at the level of the orchestra floor. The bones were buried under building - débris fallen from the upper parts of the chamber walls. Thus we have new evidence that inhumation and exhumation, both there and in the adjacent necropolis of the early Arab period, antedated the destruction of the Byzantine phase of the theatre.

The dating of this necropolis is based on stratigraphical evidence supported by the discovery of Cufic inscriptions on the north and west faces of the southern marble pedestal, one of the two limiting the orchestra. These inscriptions are datable to the beginning of the VIII century, possibly to the rule of the Caliph Abdel Malik. This dating is based on epigraphical grounds. Phraseology and contents of the inscriptions are doubtless connected with the nearby burials.

The uncovered portion of the early Muslim necropolis, as already said, was itself buried under the débris of the adjoining Byzantine building. This, in turn, was covered with a layer mostly of city refuse. This was unevenly spread over the southern slope of the hill and accumulated over a relatively long time, from the IX*th* to the XI*th* century. On its surface, later in the XI*th* or even in the early XII*th* century, the upper necropolis was founded. No traces of the two intermediary cemeteries found in other sectors of Kôm el-Dikka have been discovered in sector M, except for a single tomb in the southern section of the dig.

Upper Necropolis

Sector M :

(*See* Plan II).

Parts of this necropolis had been found previously. Finding an extension of it over this area provided fresh material which, although not altering our opinion as to dates or adding much to our knowledge of burial customs and tomb construction, confirms the conclusions already reached by the study of the far larger material collected during excavation of 190 graves discovered in 1965 and 1966.

The same types of burials were found here as elsewhere at the Kôm : box-tombs with flat tops those with gabled tops, or finally, gabled tops inserted into a rectangular frame i.e. a vertical extension of the tomb sides [1]. The gabled top occurs more frequently (80%) in sector M.

Above ground, the burials were marked with gravestones, usually mihrab-shaped. Only the third type of tombs, which stand taller than the others, sometimes did not have a plaster-modelled mihrab. The vertical extension of the sides reached above the surface, forming a rectangular frame which was then carefully plastered, with bare earth in framed space. The same type, with the variation of a moulded mihrab (Pl. VIII, 1), sometimes occurs with an interior underground support. This is a vertical transversal partition within the

---

[1] See W. Kubiak, *op. cit.*, fig. 4 and pls. II and III.

raised burial box, a sort of rib above the roof, strengthening the whole structure and probably protecting the middle part of the superstructure from collapsing, for it was, as we know, of stamped earth covered only with a thin coating of plaster, moulded into the shape of a mihrab.

The gravestones were, as a rule, much alike and similar to those described in the previous report. However, a few bore more elaborate mouldings, the corners or the arch of the mihrab, being more ornate. In some cases, geometrical designs were scratched into the plastered surface.

In the course of the last excavations, a type came to light, previously encountered, but not well enough preserved for study. This was an older and certainly poorer type of burial, where nothing stood between the corpse and the naked earth, as the pit was quite unlined. Above ground, such graves were marked with a plain, rectangular "fencing" of vertical-planted limestone slabs. The size of such superstructures, of course, varied with the corpse. The largest yet found was 1.2×1.9 m., and had the size of the average mihrab-gravestone.

As already stated, gravestones are not found throughout the necropolis. Some of them may have been destroyed. In sector M they are, as a rule, well preserved ; in section C-VI they are in a bad state; none at all were found in sector AN. Contrary to what we previously held, it is now our opinion that the lack of gravestones does not necessarily mean that there were never any in that part of the burial ground, but rather that they had been destroyed before the ever-growing Kôm swallowed up the necropolis.

To the south of the hill, where the refuse accumulated fast and covered the graves almost at the time of their closing, features such as tombstones and terrace enclosures are intact – even to the soft plaster facing. In other parts, where the growth of the Kôm was slow and the burial ground was long exposed to the destructive action of weather and man, all was damaged or destroyed. Another important destructive factor may have been the length of time for which a grave was in use, and for how many burials it served.

To the north, in sector C VI, one grave numbered CVI-5 bore indications of having been re-opened 7 times. Every time the pit was scooped out, the stone frame remained untouched. After each new burial the surface was levelled and a new layer of plaster was poured to be moulded into the mihrab shape. Several layers of plaster were thus found on the outside of many graves where the oft-scooped pit made do with the same lining. This repeated opening and closing of graves must have weakened the superstructure and, once the necropolis was abandoned contributed to a rapid disintegration. The graves, and those that had only been used once or at least not often, as most of those in sector M, are better preserved.

One characteristic of the south part of the burial-ground in sector M was small enclosed graveyards (Pl. VIII, 2). Several tombs, which could be of the same or of different types, were found enclosed within a single rectangular wall, often with a mihrab built into its south face. Such enclosures were about 6 × 4 m, to 8 × 7 m. large. The height of the enclosure wall varied. As a rule, it was 0.5 to 0.57 m high, consisting of 4 or 6 courses of smallish stones. However, in one instance (enclosure of the tombs M 64 - M 72) we came upon a wall 1.80 m. high. They were very plain walls. The stones were about 25 × 15 × 10 cms and mortar-bound. Usually the wall was only one stone thick, *i.e.* 0,25 m. In a single instance (enclosure of the tombs M 30-32) it was 0.50 m. thick, consisting of a double facing-wall with an intervening space filled with crushed limestone and mortar, a kind of *opus emplectum* masonry. These walls were generally well-finished and plastered on the inner face. Often, the space between the graves in the enclosure was paved or cobbled or floored with a layer of plaster or clay or Nile mud, spread over the beaten earth.

There was still another purpose for these walls : as the necropolis was situated on a slope of the steep hill, they walled in the terraces preventing the earth from pouring over, and preserving also an even area, at least within the enclosures.

In sector M, five such enclosures were found, each containing 3 to 8 graves. All of them belong to the late period. No such burials have been found at the early levels as yet.

The Theatre

The present state of research on the site of the monument discovered, although neither the excavations nor the architectural studies are yet completed, allow us to attempt a summary of observations in a separate chapter. This is all the more necessary since many erroneous and irresponsible ideas concerning the building discovered are being spread and even published (1), especially in the archaeologically-minded Alexandrian circles. We present this report with all reservations due to the unfinished state of the work in hand.

A. *Position* :

The theatre, which occupies the south-east portion of the Kôm, in ancient times lay within the area circumscribed by streets designated by Mahmoud el-Falaki (2) L^1 - L^2 - R^3 - R^4, that is to say, practically in the very heart of Alexandria – a location indicative of its importance.

The baths and cisterns, (3) uncovered a mere 70 m. north-east of the theatre and on the same level, may be ascribed to the same date. However, in spite of the proximity, nothing has so far been found to prove that they were intentionally linked. New data may eventually emerge from further excavations carried out between the two constructions.

The longitudinal axis of the theatre can be considered to follow an east-west direction, and the latitudinal, a north-south. Thus agreeing with the orientation of the streets of the ancient city.

B. *Historical outline* :

A careful perusal of the uncovered material points to three different periods, not to mention the last, when the building stood abandoned or at least was not used for its true purpose.

(1) Cf. for instance Dr. Faharani's article published in *Cahiers d'Alexandrie*, 1966.
(2) *Op. cit.*, Plan.
(3) W. Kubiak, *op. cit.*, pp. 73-77 and figs. 1 and 3 ; cf. also J. Lipinska, *op. cit.*

FIRST PERIOD

This is the one regarding which the least data are forthcoming, and that which are available prove most difficult to connect. This is not surprising in itself, for the remains of this period have been overlaid with material from two thorough re-modellings.

The original elements comprise : the great west wall limiting the entire building on that side and extending further than the theatre itself did in its later form (See Plan III) ; part of the vaulted substructure of the first auditorium ; vestiges of the side entrances to the auditorium ; and, probably, the wall perpendicular to the west one, which might have been part of the substructure of the original proscenium.

The west wall starts 5.05 m. deeper than the level of the theatre-orchestra – that is about 3.5 m. lower than any of the remaining walls (with the exception of the perpendicular wall which may therefore be contemporary with it). At the top it is 1.6 m. wide, but on its west face there are six successive projections–6 to 12 cm. wide–that bring the width at the base up to 2.5 m. (Pl. IX, a). The east face has not been uncovered, as that would imply partial destruction of the later orchestra's level ; thus there remains an open question as to whether similar projections exist on that side.

The Construction is a uniform : solid wall of limestone blocks, about 30×30×40 cms., bound with a lime mortar. For most of its length the wall is preserved up to the level of the theatre orchestra. In the south part only part of the wall is preserved above ground. An opening, which at a later date was blocked up, can be detected at the point where the later outer south wall and the west wall meet. This goes to prove, as does also the fact that the wall extends past the actual theatre, that we are dealing with an older element, re-adapted, as it already stood, to the later building. We cannot even state for certain that the west wall was constructed in Period I. It might have even belonged to some still earlier structure. All we can affirm is that during Period I – to which the other elements have been ascribed – this wall enclosed the building on its west side.

Part of the vaulted substructure of the first auditorium has existed throughout, serving no further purpose, merely being incorporated into the more recent substructure of the later auditorium. There are three vaults (not counting the two end ones that were extensions of the outer wall doorways) along the axis of the theatre and in line with later rooms V and XIII of the surrounding corridor. It appears certain that they provided access to the auditorium from the outer passage encircling it.

The wall perpendicular to the west wall is founded 3.5 m. below the orchestra and about 2 m. lower than the other remaining walls. It is of a different masonry from the west wall, being made of smaller stones (c. 30 × 15 cms.), bound with grey ash mortar. The depth of the blocks and the thickness of the wall itself are unknown, because its uncovering would result in the destruction of the later mosaic. If we agree that this construction belongs to the first Period it is hard to ascribe it to any part but the *hyposcenium*.

If we consider the following facts: 1) the depth and length of the West wall, 2) the blocked opening in it, 3) the entrances (to the auditorium, which at the same time separate *cunei*) of the lower *moenianum*, 4) the wall which may have belonged to the *hyposcenium* - we are led to believe that there was once a larger theatre here in the first place, the core of which alone was retained and re-modelled in later times.

SECOND PERIOD

We have much more material illustrating this period than the first. The elements are all related, completing and explaining each other, contained within the limits of the existing outer wall and the substructure. For descriptive purposes, the building may be divided into three main parts : the auditorium, the encircling passage and the scena (See pl. III). During the second period, the auditorium and passage should be considered together and the scena with proscenium by itself, for at that time it was nearly separate construction. This was to change in Period III.

In Period II, the auditorium was a semicircle, slightly elongated to the west, comprising the seats and the orchestra which they surrounded. The seats consisted of 16 or 17

rows of marble steps. The exact number is not certain, for the reconstruction of the upper part is based on the blocks as they were reset in Period III. Only 13 of the original Period II rows remain. The hypothetical reconstuction of the upper part was made possible thanks to the fact that the upper seats were marked and numbered. The first such – the thirteenth, counting from the bottom – to be found in situ was marked X on the side (Pl. IX, b) and on the upper surface of the seat bore a semicircle or letter C (sigma). Greek letters were used as the numbers, then the following seats, counting from the west extremity, are AX/C, BX/C, etc... until IΓ X/C, i.e. 13. A few intermediary blocks are missing, but there is no doubt as to the sequence. Among the blocks belonging to the upper rows we can find blocks bearing the following other marks: a twig with the number, a cross with the number, there is also a vertical line on the surface - (iota ?) – which is repeated but not always clear, a circle-(omikron ?) – on the upper surface and the numbers without any sign at all. All these blocks were reutilised during Period III, without any order of numbers being considered. Judging from the row *in situ* we can say that the sign indicated the row, and therefore that there were certainly 3 and may be 4 more rows – 4, if the numbered seats with no sign belonged to a separate row, this is not certain, for only two such blocks were found. The distance between the uppermost preserved row and the outer face of the substructure does not give any certitude one way or another. The distance would amply allow enough to spare for a columned portico or more simply a balustrade.

To the west, at both ends, the rows terminate in a flight of little steps leading up from the orchestra. These provided access for the audience to the rows in such a way that a person entering from either doorway could reach its respective row by one of these stairways. The theatre, with seats for some 400-600 spectators was small enough not to require more than that.

Seats and steps are of carefully matched marble : grey-white with bluish veins. The matching is worth stressing as most of the material is re-employed, hewn from various

kinds of architectural elements : friezes, lintels and even capitals. Because of the varied origins, the sizes of the blocks are irregular. Length varies from 40 cms to over 3 m. ; height and width also tends to vary, mortar being used in a rather slovenly way to fill in gaps.

The central block in the lower row is raised. (see. Pl. XI).

Below the marble steps runs a course of pink Aswan granite blocks of similar shape and size as the marble ones, providing a sort of base for the semicircle of seats. It stands on the s: me layer of limestone rubble as the whole floor. The entire area within the semi-circle was covered with loose, whitish, lime mortar upon which the paving slabs were laid. Judging by the fragments preserved, which lie close to the granite foot-rest, these were about 4 cms thick and of plain light grey marble. Nothing, however, proves that the central part may not have been multicoloured and patterned.

The seats rest upon a solid substructure including the filled-in vaults of Period I, partly of limestone blocks joined with a lime mortar mixed with crushed brick, partly of shapeless limestone rubble poured over with the mortar. The marble seats were laid upon a thick layer of very hard, yellowish lime mortar that preserved the negative imprint of the blocks, visible at the south part of the auditorium from where the blocks of seats were taken out. These imprints betray the origin of the blocks as the different architectural elements (Pl. X, a).

The Period II auditorium had both its sides lengthened, swallowing up the side-passages of Period I that can be clearly spotted in the masonry of the substructure; here it comprises a single facing course of stone with an inner filling of rubble soaked in mortar. The new side-passages were shifted further west. They consisted of stone vaults extending from the north and south doors in the outer walls and cutting off the auditorium from the stage proper. They probably were paved with a single flooring, laid across the orchestra ; in fact, the rubble and mortar on the orchestra floor break off to the west along the line of side passages, forming a sort of sill.

The outer face of the substructure, at the auditorium on one side and the outer wall on the other, forms the sides of the encircling corridor. This might have had an upper storey connected directly with the top of the auditorium. The lower part did not open at all into the orchestra and could only be reached through the side-passages. We have no data whatsoever regarding the roofing or pavement of this corridor. The outer face, at this stage, was not plain but probably had been formed of a double tier of arcades, each corresponding to one storey of the corridor within. After the re-modelling, the arcades were not preserved - not even the ground-floor arches. The only witness to their existence is stage III of the outer wall : a sequence of cruciform pillars filled in with a sort of screen-walls, clearly built as a blockage of the lower parts of Period II arcades. The level of their sills shows that the corridor has probably never been entered through those arcades, being much higher than the level of the thresholds of the entrance doors.

Few vestiges remain of the Period II *scena* and *proscenium* construction which was later entirely re-built ; enough, however, to prove that there was one, thus, with the auditorium described above and the surrounding corridor, completing the plan of a Roman theatre. A trial pit sunk into the northern half of the enlarged orchestra brought to light the *proscenium* foundations, parallel to the sill bordering the orchestra from the west and the whole length of the side entrances passage apart ? (Pl. X b) These foundations comprise large limestone blocks, including a few of nummulitic origin and two of marble. They are roughly hewn, untrimmed and of variable size, the height alone being constant, c. 40 cm. A single course remains, laid over a bed of limestone rubble and plaster with a little gravel and dross.

There is nothing left of the *scena* itself. The West wall that in Period II must have constituted the back of the stage already belonged to the older building. A few large blocks, bound together with mortar, found 5 m. west of the *proscenium* foundations, might possibly be connected ; but that is not enough to be sure and no more can be uncovered without damaging the Period III mosaic. It is not possible either, at this point, to state whether the deep wall which is supposed to be the original *hyposcenium* was of any use in Period II or not.

THIRD PERIOD

Being the latest, the best preserved, with the stage actually undergoing reconstruction, this will be described in greater detail. Here it is enough to say that existing remains demonstrate a complete change of function leading to an equally essential change of appearance. Period III was also to be the last in the life of this building (Pl. XI).

a. *Architectural Description* (Plans III and IV).

The original auditorium design – roughly a semicircle – was changed into a full circle. The seats were extended on either side as far as the exterior substructure allowed, yet not closing the circle. The rows of seats, prolonged west beyond the steps did not continue parallel, but were slightly deflected to north and south. The number of rows was reduced to 13. The blocks from the upper rows were re-utilised mostly for the westwards extentions; others for the niches which replaced the 3 or 4 suppressed rows at the top of the theatre. The side extensions made the side entrances useless, as well as the vaulted passages leading from them into the auditorium. These were blocked up and joined to the substructure of the additional seats.

The whole change stemmed from a desire to cover the auditorium which, so long as it was a semicircle, could not bear anything more than a *velarium*. Once the design was altered to a circular one, a brick dome could be built over it. While excavating the auditorium, the whole *orchestra* was found to be smothered in brick rubble which included some fragments of spherical shape that could only have belonged to a dome.

On the west there is a gap between the two sides of seats, and here the roof was carried on arches borne by big columns on the tall pedestals. These are still to be found *in situ* with the bases of the columns still standing in place. They are not parallel but slightly off centre, on the radius of the outer circle of the auditorium.

The constitution of the western part of the circle automatically cut out the *proscenium* ; the stage building was dismantled down to its foundation. In its place, a main entrance was opened leading through the above mentioned arches placed on the central columns. The *orchestra* area was then levelled. The foundations were unified by inserting large slabs of limestone between them. Then the whole floor was covered with a thick layer of greyish mortar and new paving-slabs were laid. The new floor is about 12 cm. higher than the old one. The levelling of the *proscenium* must have taken place before the dome was set up, because the pedestals of the columns that carry the front part of it are fixed into the slabs (Pl. XII, a).

When 3 or 4 rows of seats had been taken down, a semicircle of niches was built around the top of the auditorium. Two of these have been preserved : the middle one and the first one south of it. The problem of establishing their number is connected with the number and kind of columns found lying in the auditorium. There are 14 of these : 4 of pink granite, 4 of grey granite, 2 of black granite and 4 of green marble. Their average height, except for the pink ones, is about 3.5 m. with a diameter of 0.45 m. The pink granite columns are about 4.20 m. high with a diameter of 0.5 m. With the exception of these, all of them lay obliquely across the seats – obviously toppled over from above, where the only place they could have stood was between the niches. They lay in the following order : one black, two grey, four green-and again two grey, one black ; all of them, east of the little steps, around the auditorium. Thus, 10 columns would seem to indicate 5 niches, each flanked by two columns. Two columns of the same kind and colour, (except the two single end ones), standing against each pillar. The pink granite columns belonged to the western extention of the auditorium where the side steps interrupted the niches. Most probably they belonged to the north and south semicircular wall which closed the auditorium to the west. Witness to this is the column that toppled into the north foyer. Arches or plain beams, resting upon those columns, could provide openings from the auditorium into the foyer on either side, just as the central archway

between the columns on pedestals connected the auditorium with the frontal part of the entrance hall.

The so-called entrance-hall or foyer, in Period III, comprised the entire front of the building and was itself devided into three parts: centre, north and south, the separation on either side being two large grey granite columns, 4.75 m high and two pillars in line with them one against the west wall and one against the semi-circular partition. The columns rest upon high, sculptured bases. They are the only ones the position of which cannot be doubted: the two south ones were found lying in the rubble beside their bases which are still in place. The symmetry of the foyer is obvious, and is born out by the position of the lower part of another analogous base brought to light on the north side. The northern separation line coincides with a deep wall, perpendicular to the west one, that may have been part of the period I *hyposcenium*. The Period III builders must have known it and consciously used it for a foundation.

The central part contains the main entrance as well as that to the auditorium directly in front of it, through the columns. The north and south side-rooms had the entrances too at the corners where the outer semi-circular wall met the west wall, but they were both closed in Period III, although not at the same time. The first to be dispensed with was the north entrance, replaced by a staircase which probably led to the upstairs passage of the surrounding corridor. This is surmise, for the first six steps alone remain; limestone blocks on a bed of earth and rubble. However, it is suggested by the presence of 3 pillars along the north wall, from the stairway to the wall, shutting off the corridor to the west. These may have supported the western extension of the upper passage. The south entrance was carelessly blocked somewhat later, apparently towards the decline of the building.

As to the roofing of this part of the theatre, again we can but surmise. The separation of the central room into three parts may indicate three vaults. The side-rooms are practically square and provide no extra support, thus the existence of cupolas is most probable.

The pavement will be mentioned later, in the section on decoration.

During Period III, the corridor running round the back of the auditorium partly ceased to be functional, there being no longer any access from it into the auditorium, except perhaps two entrances of the upper storey, in line with the side steps. However that might have been, at some point during Period III the corridor was completely rebuilt over. The passage was partitioned by walls built across it into a series of rooms communicating through archways (See Pl. XII, b). The partitions started from the pillars along the inner face of the outer wall. Perhaps they were meant to buttress both circular walls – the outer one and the one back of the seats – against the extra pressure of the dome.

Besides that, probably right at the beginning of Period III, all the openings in the north wall were closed up and an earth terrace erected against it. The passage remained two-storied, and access to the ground-floor part was obtained through the entrances opened into the foyer lateral walls.

Part of the brick vault that roofed – in the passage, at least at the beginning of Period III, was also preserved. What the connection was between that and the transversal partitions is a question that remains to be debated. It is possible that the vault, as an earlier construction, might have begun to crumble before the cross-partitions were built (stressing of the dome ?) and repairs were later carried on inside separate rooms. The flooring is nothing but a plaster layer poured directly onto the ground, separately again for each room, for the floor inside is often markedly lower than the thresholds under the communication arches. The conditions of the floor and varying levels at the separate rooms indicate that this part of the building was most probably not open to the public ; all the more understadably as it must have been in utter darkness once the arcades were closed.

In describing the three parts of the building, auditorium, entrance-hall and the corridor, we have so far neglected two other elements which were extra-mural : the paved west

square and the north and south buttresses found by the Period II walled doors. The pavement extends westwards away from the west wall and so far its furthest edge has not been reached after 5 m. of excavations. The flagstones are laid somewhat lower than the orchestra floor inside, so the west wall preserved to the level of that floor now makes a kind of sill some 40 cms high. The limestone slabs are not more than 6-8 cms. thick. They are laid almost regularly upon a grey, ash mortar. It seems that either there were two pavements, one earlier and one later, or else, at some moment the floor underwent repair, because a trial pit sunk close to the west wall and some early Arab graves cut into the pavement all show two or more layers of stone flags. The stones come in various sizes and small stones in the shape of gutters are to be found as well. This pavement might have been part of a square before the theatre, or a columned portico. Fragments of red facing have been found on the outer side of what is left of the west wall; and since such painted facing was generally used in roofed places, that might indicate a covered portico.

The north and south buttresses present a problem as to their function. They were probably built to afford support to the outer wall once the weight of the added domed roof threatened its stability. Two north buttresses have been entirely uncovered and do not appear to have been erected at the same time. The eastern one seems older, although it starts higher than the other ; the western one is built in a deep trench cut through the whole thickness of the earth terrace in front of the northern wall of the building. Possibly, this wall was given a first buttress, when it started to sag, then the earth scarp was added when the condition became more serious, and finally the other buttress, in a threefold effort to prop it up. The problem cannot be solved until the south buttresses are uncovered down to their foundations; however on that side the situation looks different, for there is no supporting earth scarp.

b. Material and construction :

The building materials used are limestone both local and nummulitic from Moqattam, marble, granite and burnt brick.

The main material used is the softish, whitish-yellow limestone, quarried probably West of the city in the Mex-Dekhela area. The next material most used is burnt red brick. The other materials are mainly used for decoration, although marble columns for instance were at once decorative and functional.

Two methods were used in building walls : they may be described as *pseudo opus quadratum* and *opus emplectum*, while really being *opus mixtum-emplectum* because of the combined use of stone and brick. *Opus quadratum* makes use of fairly large stones, about 30 × 30 × 40 cm. and a lime mortar. We found it in the west wall, the auditorium substructure and the semicircular walls surrounding the western, later part of the auditorium space. *Opus mixtumemplectum* was used for the outer wall–particularly those parts blocking the arches and the straight strip between the walled doors and the west wall. In our case, *opus mixtum* describes the simultaneous use of two materials, brick and stone, disposed in a particular way : the limestone is hewn into small, regular blocks. about 15×15×30 cm. which form the main facing courses of the wall, between which was poured a filling of limestone rubble mixed with mortar. Bricks are used as a kind of "bond-stones", three layers of brick being laid across the entire width of the wall. Their narrow band, interrupting the stonework at intervals, constituted at the same time a decorative element.

Bricks were also used for arches and vaults and, above all, for the domed roof. The bricks used varied in size, probably according to their position in the curve : 25 × 15 × 3.5 – 25 × 25 × 4 cms, and those used for the passage vault : 23 × 17 × 3.5 cms.

The other materials – marble, granite, nummulitic limestone – are generally used for decorative elements, if we leave out the nummulitic blocks found in the semicircular wall west of the auditorium, which are accidental.

The auditorium seats are finished with marble slabs laid upon mortar. Part of the columns, all the bases and pedestals, capitals, and brackets were also cut in marble. The orchestra pavement was marble too, laid upon grey mortar, and the fragments of such mosaics as survive, are made of tiny grey and black marble cubes. Most of the marble used in the theatre is greyish-white, fine grained, sometimes blue-veined. Pure white marble occurs occasionally, as well as green variety similar to "cippolino".

Most of the columns and the lowest course of the auditorium benches are made of granite. Three kinds were used, all from Aswan: pink, grey and black. The coarsest in grain is the pink, some of it is almost red; the others are finer, and have not weathered so much. The grey granite of the columns tends to corrode and the flakes can be crumbled in the fingers.

Nummulitic limestone is the least used. There is only one plain, square capital made of this material, and the base of the side flights of steps, leading upwards from the orchestra.

The various types of mortar used will only be known when accurate chemical analysis has been carried out. Most of them are lime mixtures, sometimes with an addition of crushed brick that tints the mortar pink. Another kind is grey and contains ash. This type is much more friable than either simple lime-and-sand or lime-sand and brick combinations.

c. *Decoration*:

Not much can be said about the interior decoration of the theatre. The building was not destroyed suddenly, but underwent a slow process of deterioration. The empty monument was systematically despoiled of such valuable materials as had been used for ornament. All that has been found of these among the rubble are such elements as played a functional, structural part and therefore could not be easily robbed when the building was still standing. The columns, for instance, overturned when the roof collapsed and were buried beneath its debris. It would have been too

much trouble to dig them away, whereas the bases that remained standing above the rows of seats, when the rubble had filled in the lower part of the auditorium, were all removed ultimately.

All the architectural elements that give a clue as to ornament are re-employed. Of the 8 capitals preserved, no 2 are similar. The pedestals and bases all have different measurements and sections. This obtains even for the pedestals of the supporting columns of the entrance archway: the north one appears to be re-used sculptured out of some older block of approximately the same size and shape – the section, both upper and lower profile showing a clumsy imitation of the south pedestal.

Most of the marble capitals are Corinthian. Their periods differ[1] as well as their origins, i.e. they were taken from various other buildings. The acanthus leaves, the flowers, the scrolls exist in every stage of simplification, and the relative proportions of all those elements differ widely. All the capitals are of either white or grey marble, except one which is of nummulitic limestone. This one differs entirely from the others, being of the simple Byzantine type: a plain four-faced block, bearing a Greek cross on each face[2].

The eleven preserved bases can be divided into three types, according to their sections :

1. *Torus – trochilus – torus*, similar to the classic Attic base.
2. Three rollers (*torus*), of different height upon a bevelled plinth.
3. Double-decker base : the lower being the common Attic type with a plinth that is square or octagonal and the upper a high drum decorated with acanthus leaves in shallow relief. (Pl. XIII, a) The odd thing about these is that they are unfinished: some of the leaves are barely outlined with the chisel and drill.

---

(1) End of III to V Century A.D., (cf,) R. Kautsch, *Kapitelstudien, Beitrage zu einer Geschichte des spaetantiken Kapitells im Osten vom vierten bis ins siebenten Jahrhundert*, Berlin 1936.

(2) Cf. R. Kautsch, *op. cit.*, p. 166, Taf. 33, no. 536.

Few vestiges of floor and wall decoration survive. Apart from the plain marble pavement in the orchestra, parts of the floor of the central hall, on either side of the entrance passageway, were paved with a mosaic of black and white marble tesserae, in a simple geometrical pattern upon a white background. The north part of the mosaic has a fish-scale design (Pl. XIII, b); the south one consists of squares and circles. The size of the mosaic cubes is 1.5 - 2 cms. In the side-halls, there were two overlying pavements. The older was very elaborate, of very thin, pieces of different stones c. 1.5 cm : marble, alabaster and porphyry, laid over a layer of hewn pot-sherds and soft, whitish mortar (Pl. XIV, a). As far as can be judged from the few remaining fragments the designs were squares, triangles and straight lines. The pavement thus provided could not have been very strong, for the remaining stones are cracked into minute pieces. So, the second floor was laid - a layer of hard, yellowish mortar, that was to take the slabs or the mosaic. This pavement was never laid; mortar surface had been smoothed and scratched in squares and circles, as the design required - but the work stopped there.

As for the walls, none of the decorations remains *in situ*. As far as we can tell, it was of two types: polychrome painting and glass mosaic. A few fragments of glass-mosaic as well as some scattered cubes were found, all of them in the upper layer of the rubble that filled the auditorium. It probably covered the walls or the vaults of the upstairs niches.

Fragments of painted stucco and a few plastered stones bearing traces of painting, were found throughout the theatre, not only in the auditorium but in the foyer as well. The fragments are too small to reveal anything about the patterns involved. The more frequent combination of colours was yellow, black and cherry-red. The distinguishable elements - straight lines, stripes both wide and narrow, spirals, waves, ovals and circles. Upon a few pieces of facing, two layers of paint are clearly seen. In some cases, the colours have merely been freshened while in others they are quite

different, showing that, in some parts at least, the interior decoration was once changed.

The upper passage was painted too, though more simply: a coat of whitewash with blue stripes made its decoration. As already mentioned, the lower floor was in darkness.

PHASE OF DECAY

The excavations have brought to light additional data regarding the subsequent fate of the building described. We do not know how long its Byzantine period lasted. We may assume that the building was in use until the Arab conquest, but have no sustaining proof. The theatre may in its third phase have been one of the 100 Royal Places of Entertainment mentioned by the conqueror 'Amr Ibn al-As in his famous letter to the ruling Caliph. It was first quoted by Ibn Abd el-Ḥakam [1], followed by practically every Arab source relating the conquest. The letter is probably apocryphal and full of oriental exaggeration, neverthless it gives an idea of the conquered town and of what things most impressed the Arab invaders there : the number of the population, of the merchants, of the baths and of the places of entertainment. From the mere mention we cannot guess much about the kind of entertainment these places provided. The building with which we are concerned when the Arabs saw it was clearly not a theatre. However it was probably used for some kind of spectacle or gathering, not however of a nature so absorbing as to prevent the audience from giving a thought to racing or other like amusement. The marble seats bear inscriptions and drawings to prove this.

The building survived the early Arab period. It stood empty and abandoned for a length of time - long enough for everything of any value to be removed ; movables first, then the wall mosaics of coloured glass, the marble seat-blocks from practically the whole south side of auditorium, part of the marble steps of both staircases and the marble pavements of both orchestra and entrance hall.

[1] See Kitab Futuh Misr, The History of the Conquest of Egypt, North Africa and Spain, ed. Ch. C. Torrey, New Haven 1922, p. 82. Abd al-Hakam calls these places *al-malha al-maliki.*

Throughout that same period, people made use of the small, dark cells into which the lower encircling passage had been partitioned. Clear proof of this was found in several cells. In room IV, on the south side of the corridor, a large grey ware ceramic storage vessel was buried in the floor of beaten earth (PL. XIV. b). In room I, along the axis of the passage, a strange structure was found that must have been used as a water container or storage-box. It was shaped like a small rectangular tank, the long sides of which are made of limestone slabs, the short sides and bottom of marble pieces obtained by sawing through a column lengthwise. In the bottom, the flat side faces upwards, the rounded side down in the short sides, the rounded side faces outwards. The opening is c. 160×60 cms., the bottom 130 × 60 and the depth is 33 cms. The joints were carefully filled with mortar. The whole thing was sunk into the floor, the opening coming level with the surface; moreover, the lower part fixed into the original passage pavement. The same occupation level was found in other cells. The beaten earth floor, however, does not lie at the same level in every cell. There are sometimes two layers of it. No trace of human use exists in the north rooms, which were found in a much worse condition.

The space in front of the building, as was shown in the first part of this report was used as a burial ground and the western rooms in the encircling passage served as ossuaries for storing the bones from the nearby graves when they had to be emptied for new burials. There must have been in that time a free access from the exterior to this part of the monument. The great doors must have been stolen before anything else, but the doorway was not yet blocked with rubble fallen from the collapsing dome.

The period of deterioration must have lasted long enough for the main mass of plastering to have dropped off the walls and ceilings, depriving them of their gaudy colours. In proportion to the size of the building the amount of painted fragments found among the rubble was insignificant. Destruction of these can mainly be ascribed to time and weather, and not, as it is so often the case, to man. The few preserved fragments with their still vivid colours must have come from well-sheltered crannies.

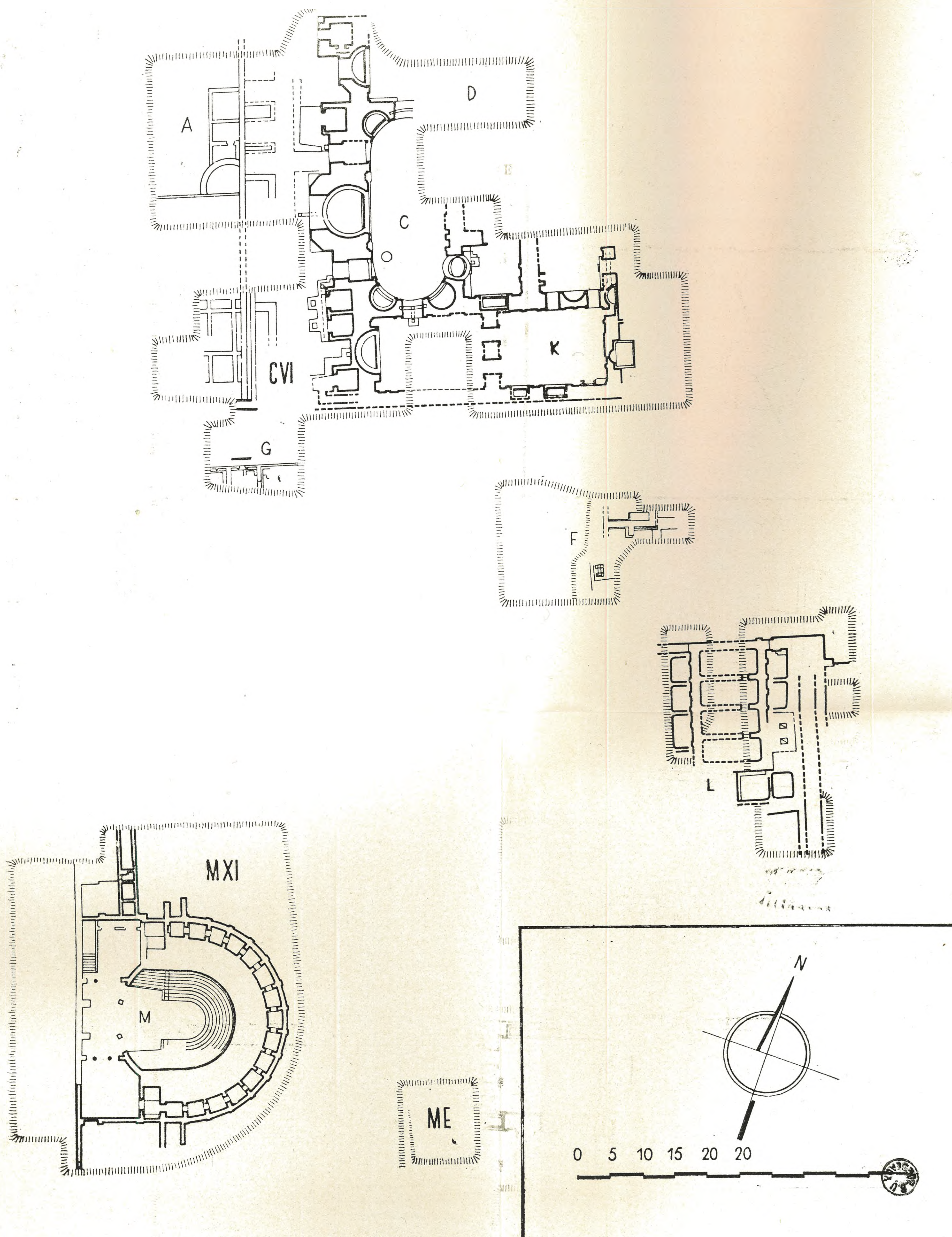
The roof and upper walls did not collapse all at once. The north west side seems to have come down first; then the central dome, the arches and the entrance-hall vaults, when the outer walls shifted – most probably during some violent earthquake. That may have been the same as destroyed the upper part of Pharos, in 792 A.D. [1] There is no contradiction between this date and that of the Kufic inscription upon the south pedestal in the front-hall, which can be ascribed to the days of the Caliph Abd el-Malik, i.e. 685–705 or somewhat later. The vaults of the circular corridor held out longer, then caved in at various periods, some of them as late as the time of the upper necropolis.

The robbing and quarrying of building material did not come to an end with the collapse of the domes, vaults and upper walls. It went on until the day when the mass of refuse and rubble outside grew to the size of a hillock that swallowed up the ruins. Once earth had covered them up, in the late XI or XII century, the large necropolis of that period spread over this area too. Building material was taken from the upper courses of all the walls, particularly the outer wall and the one encircling the auditorium. It is then, most probably, that the marble of the seats was removed both from the niches and the north upper rows of the auditorium. Only 13 were saved: those that were carried down by the collapsing wall and lay buried and hidden under the rubble, between the auditorium and the exterior wall. That also is probably how the preserved part of the auditorium was saved. The work of the building-material hunters helped to save such elements as lay deeper. For instance, the mortar and plaster scraped off stones that they cleaned, grew to form a hard, compact layer that it did not pay to dig through even to retrieve what might lie beneath. Moreover this additional rubble accelerated the filling in the auditorium, preventing access to it. The only way onto the rubbish pile was from the west where, until the late XII century, the ground level remained 5–6 m. lower than on the east side – and where

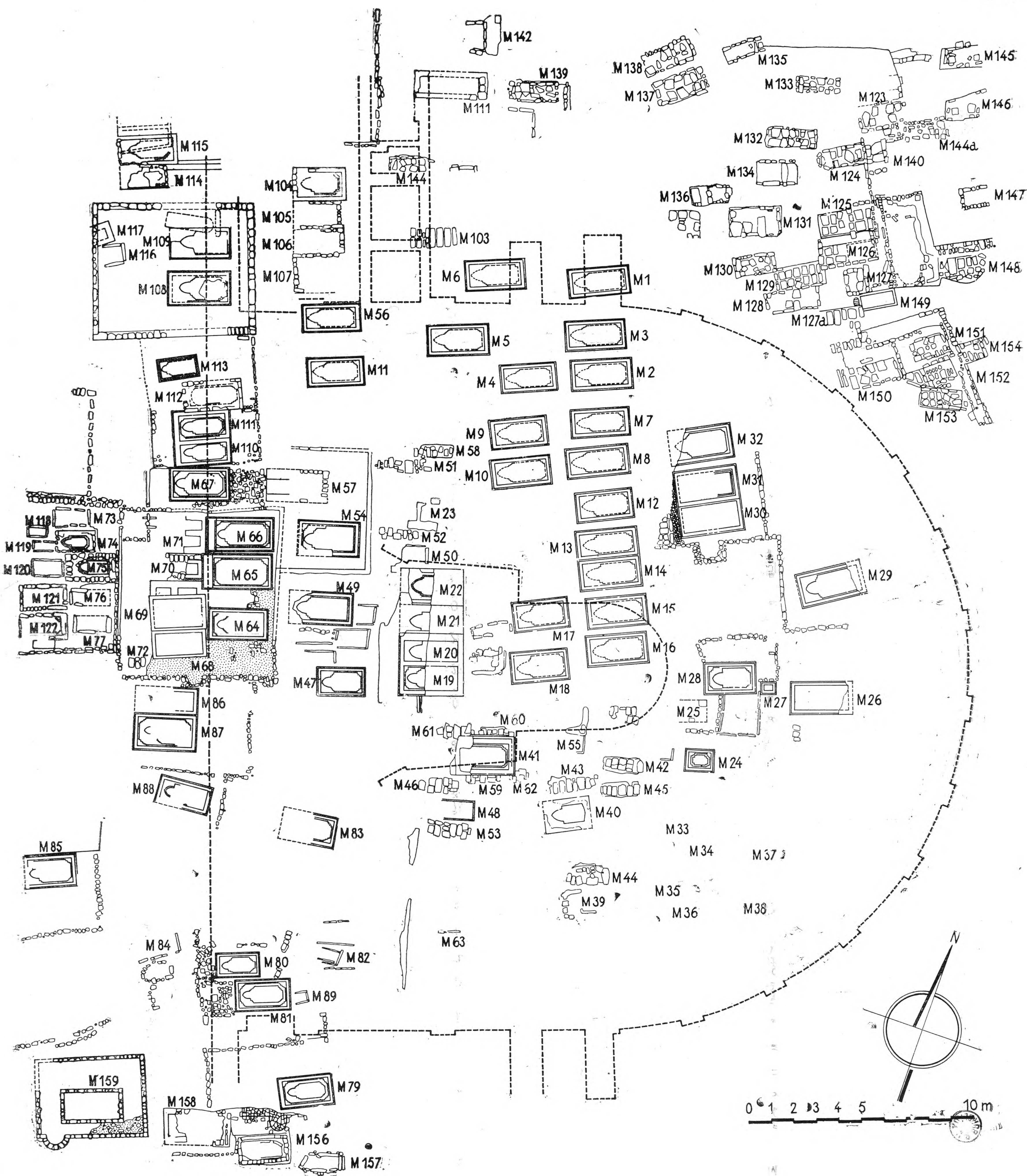
(1) The information is given by Ibn al-Athir. See ed. by C. J. Tornberg, Leyden 1851-1876, t. VI, pp. 104-105.

more elements are lacking. It could, however, also have happened that they had been robbed earlier, when the main building was still standing.

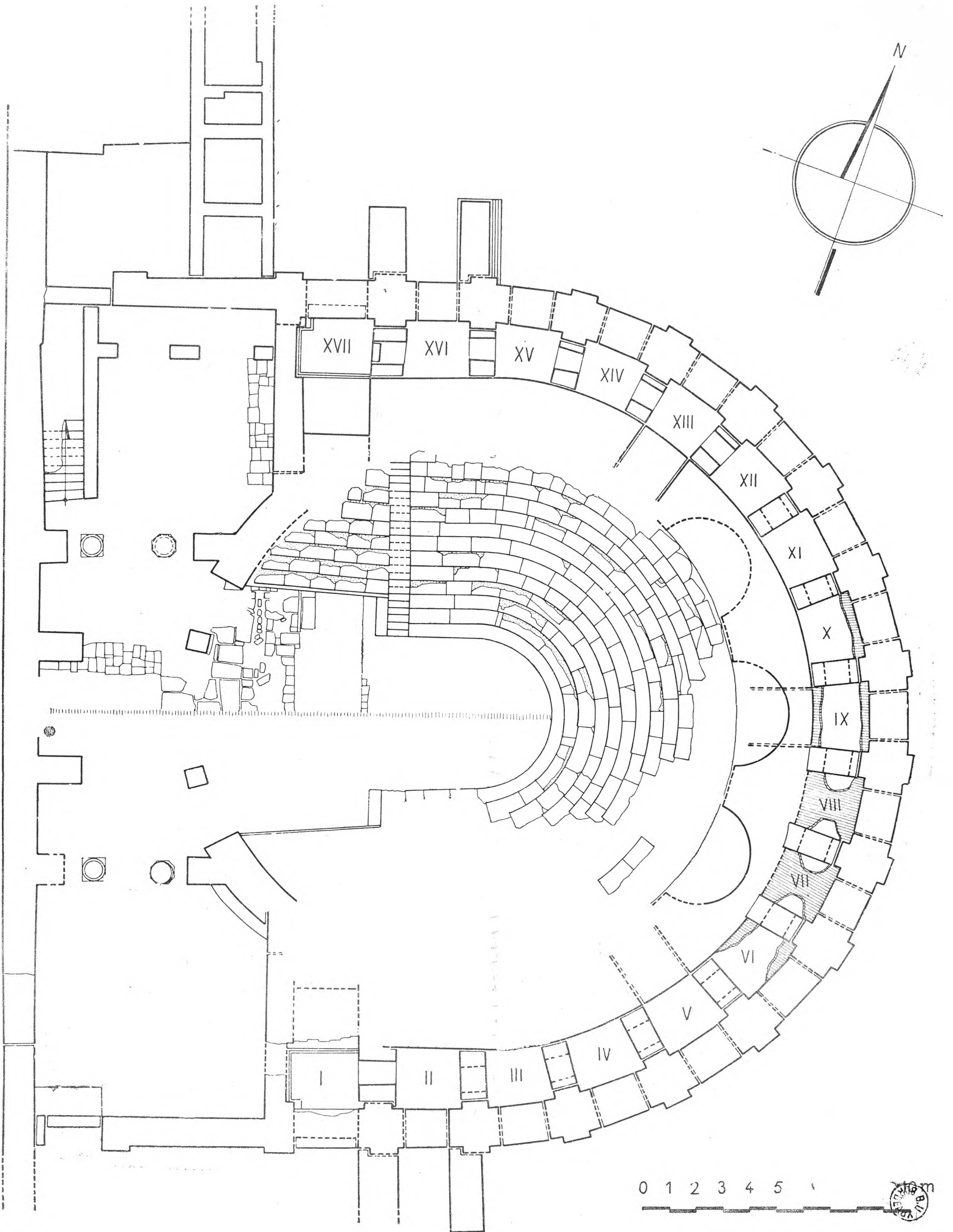
Wladyslaw B. Kubiak and
Elzbieta Makowieka



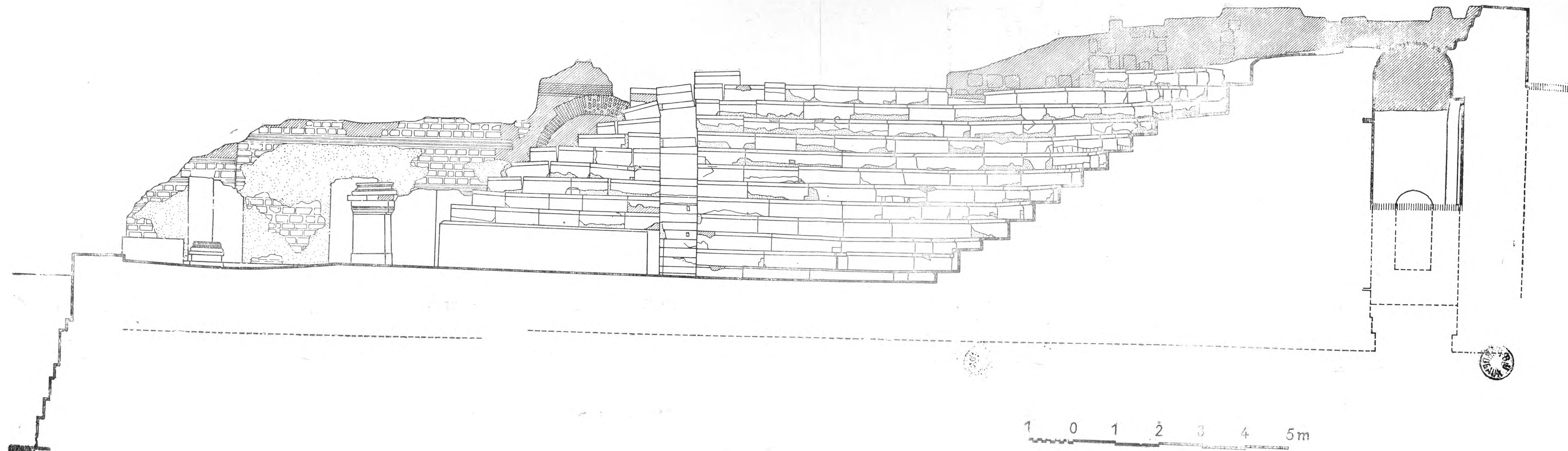
ALEXANDRIA, KOM EL DIKKA, GENERAL SITUATION, OCTOBER 1966



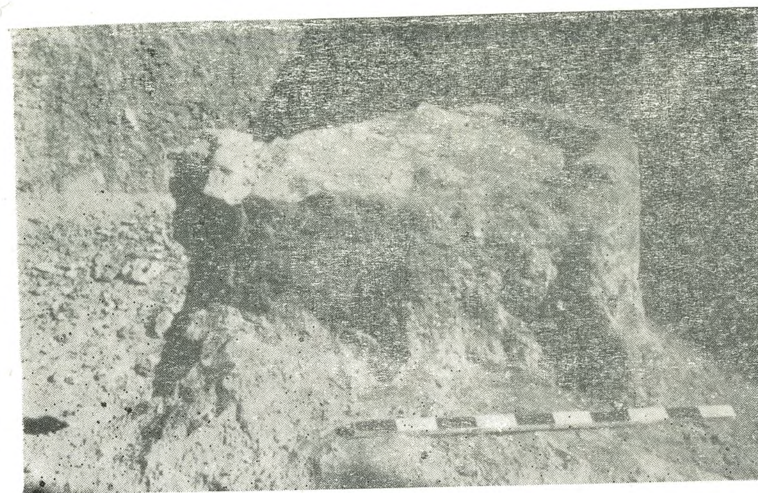
ALEXANDRIA, KOM EL DIKKA, SECTOR M, UPPER NECROPOLIS, OCTOBER 1966



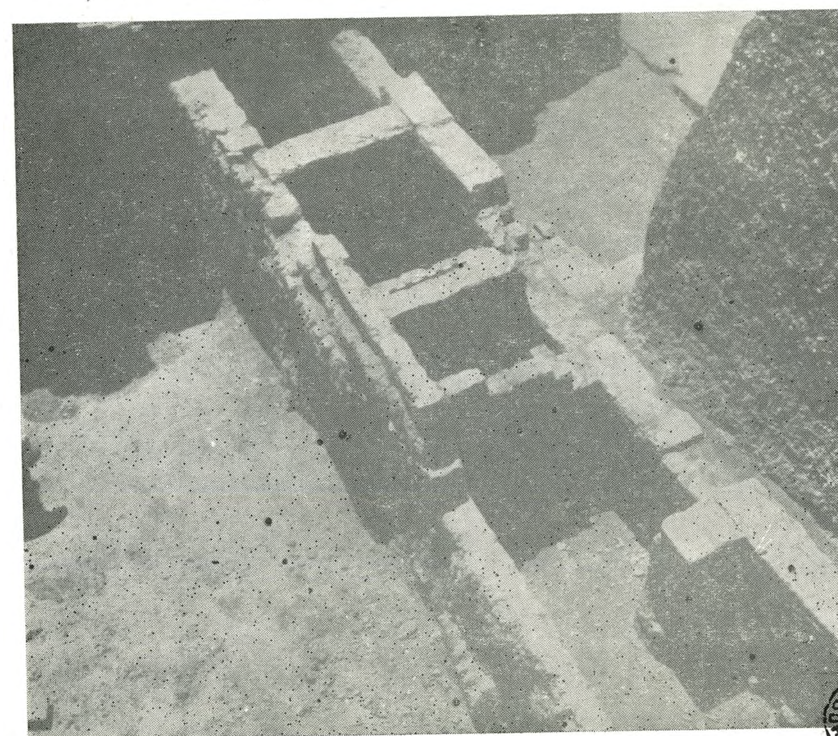
ALEXANDRIA, KOM EL DIKKA THEATRE, OCTOBER 1966



ALEXANDRIA, KOM EL DIKKA THEATRE, EAST-WEST SECTION, OCTOBER 1966



1. The cylindrical brick-kiln (view of the furnace) at the sector M XI



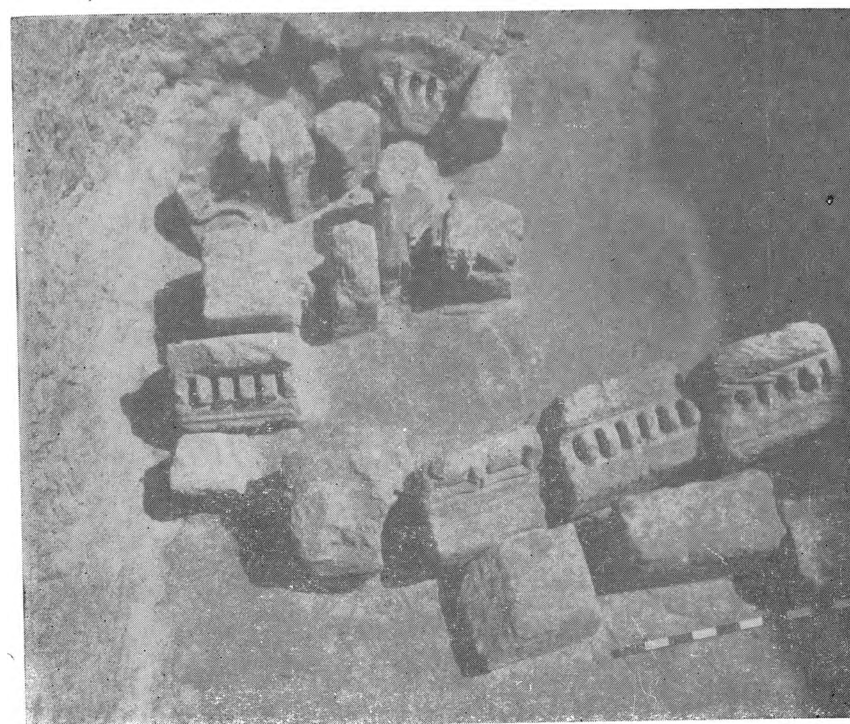
2. The stone constructions, limiting sector M XI to the west, (view from north east)



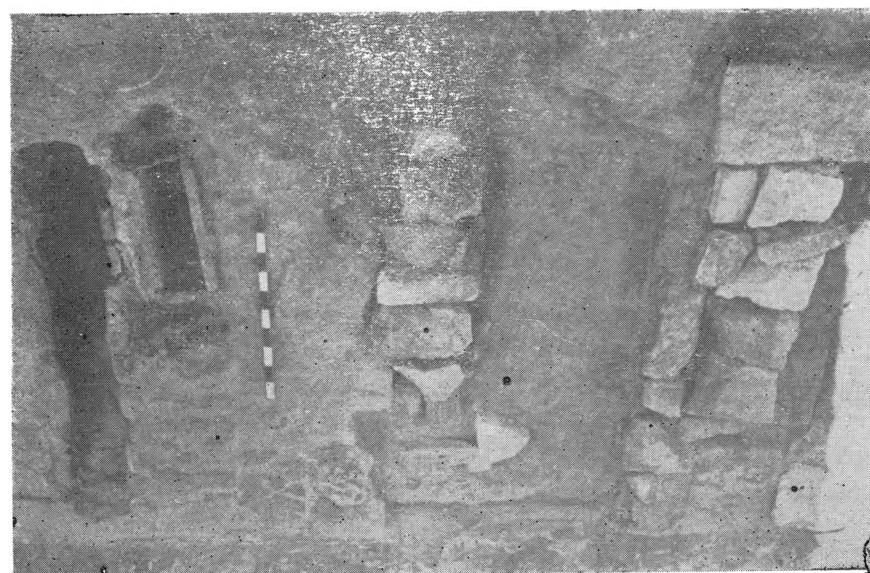
1. The stone constructions at sector M XI the west side.



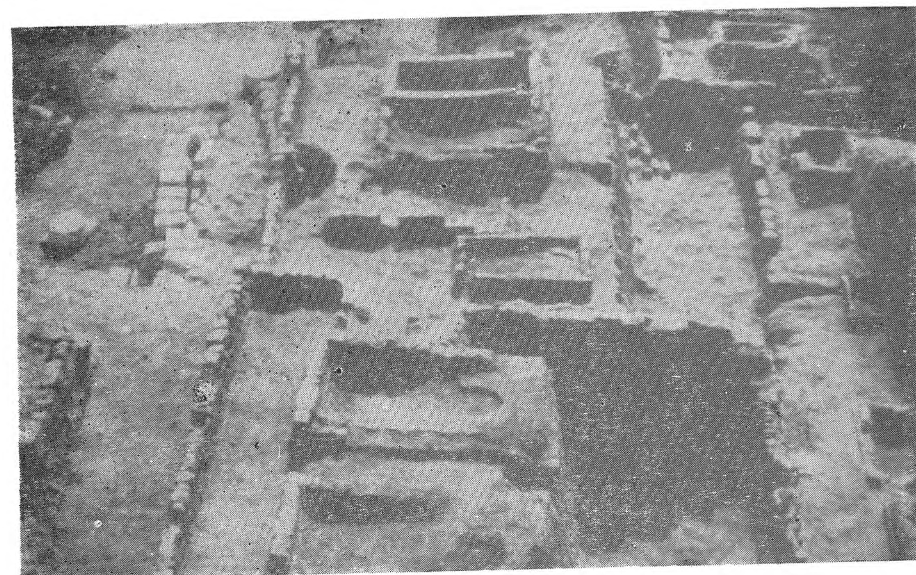
2. General view of the sector ME (east)



1. Fragments of architectural decoration at sector ME



2. Tombs of the lower necropolis, close to the theatre's west wall.

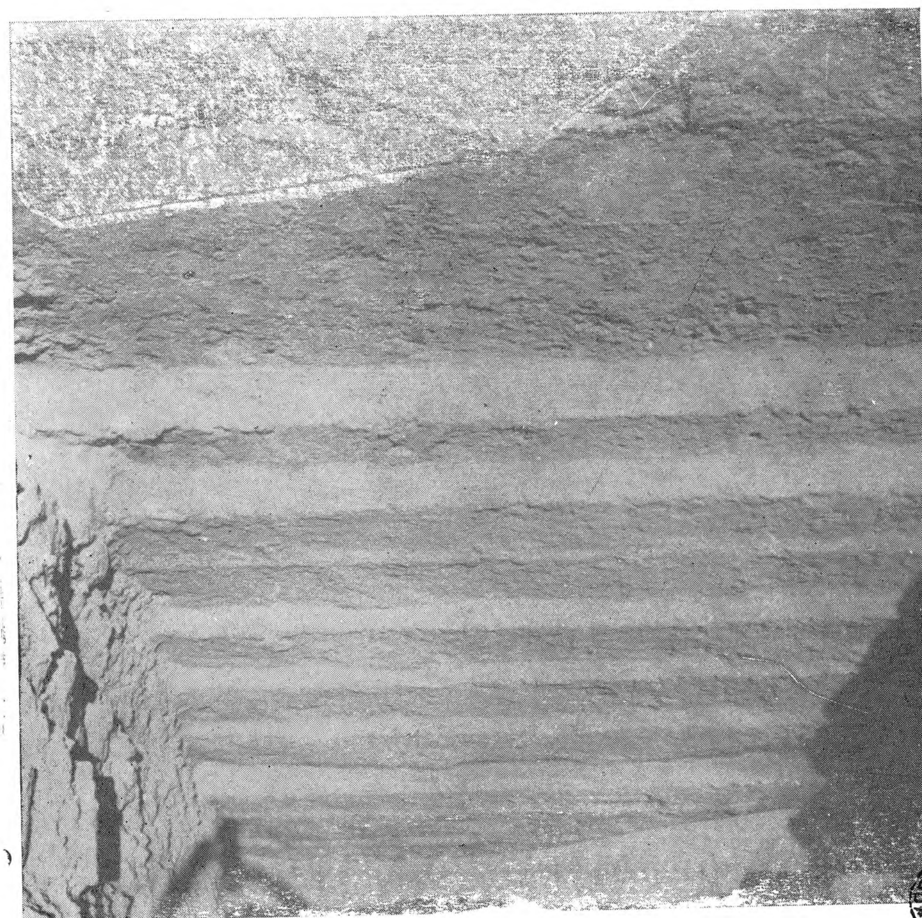


1. Part of the upper necropolis at sector M.

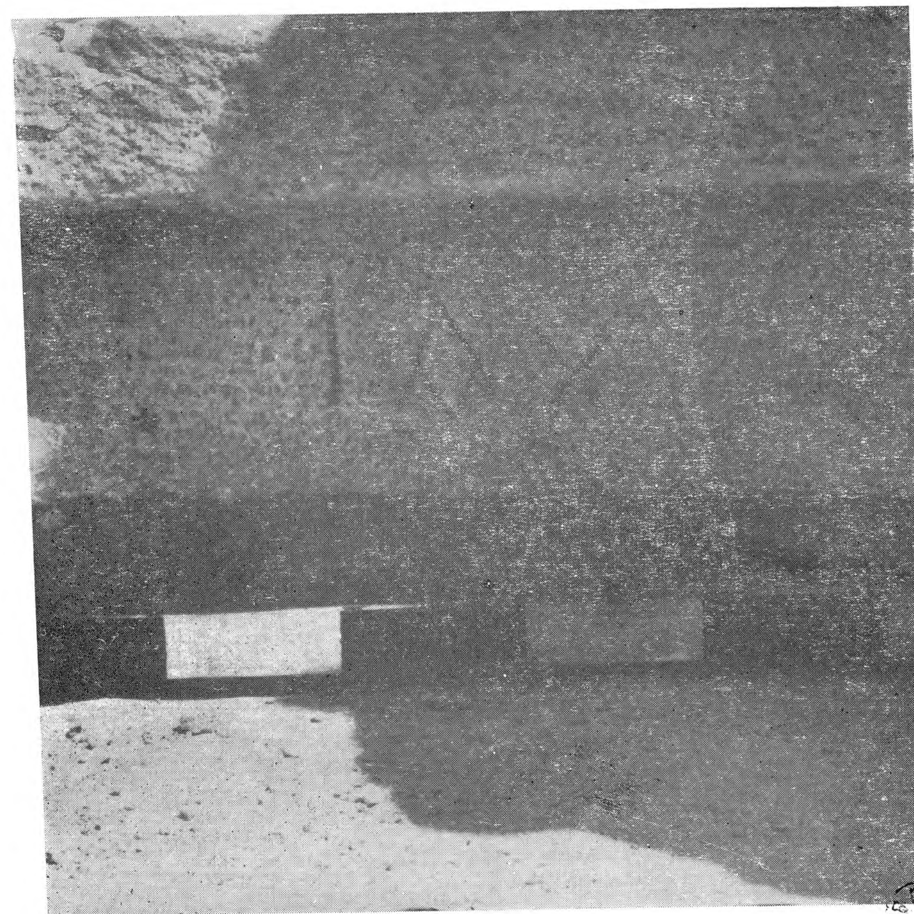




2. One of the enclosures of the upper necropolis, tombs M 64-M 72.

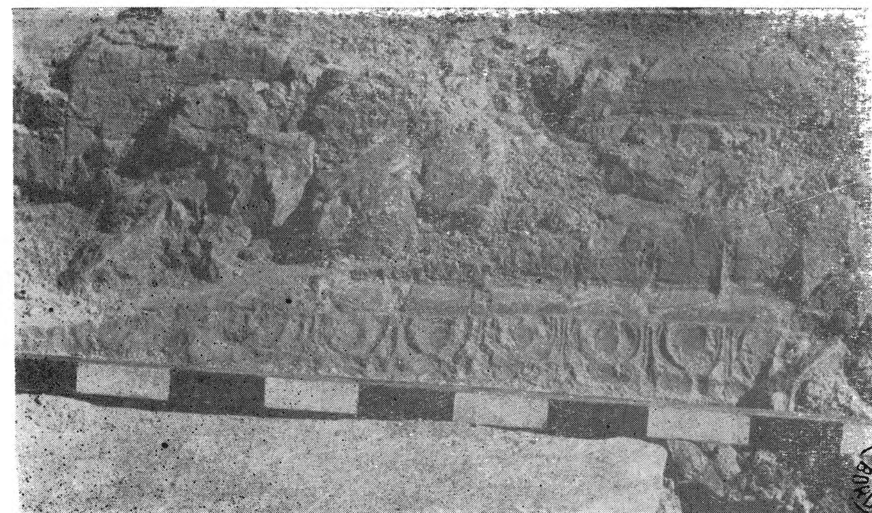


1. Western face of the west wall, underground part, with the projections.

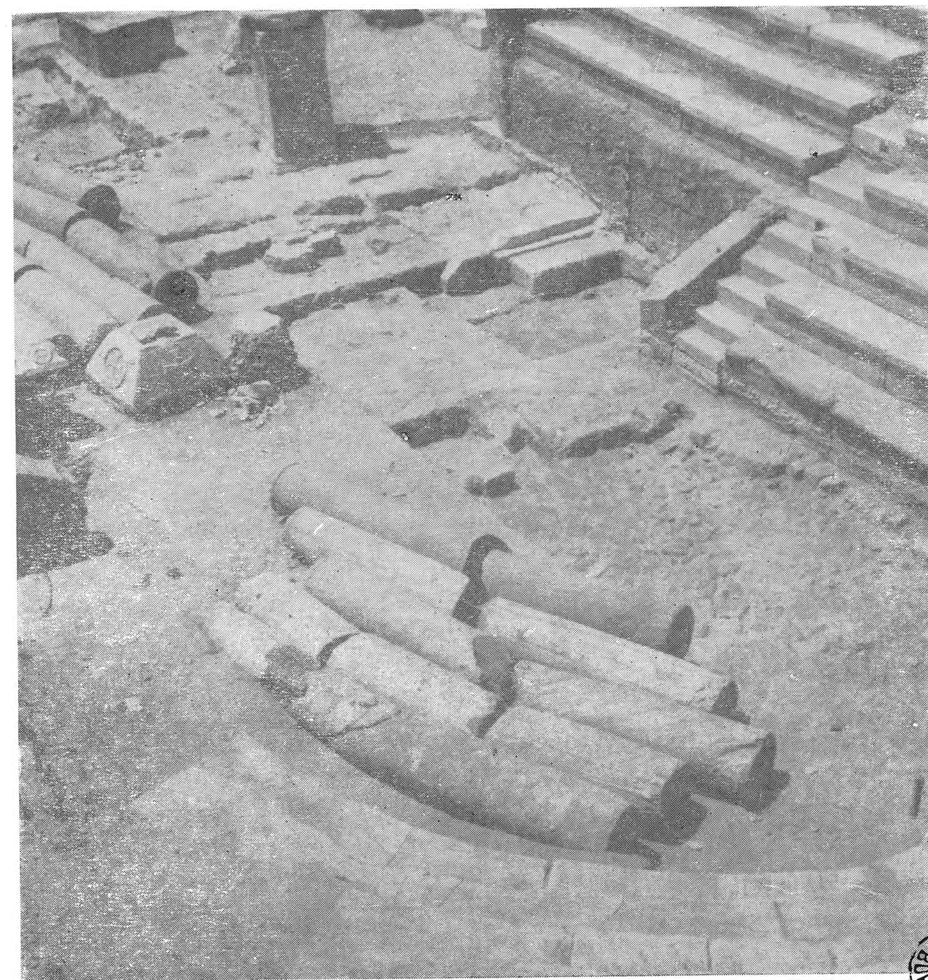




2. One of the marked blocks of the uppermost preserved row of the numbered seats.



1. Imprint of the re-used, ornamented block of seats, preserved in the mortar.



2. General view of the foundations of scena and proscenium of the Period II.

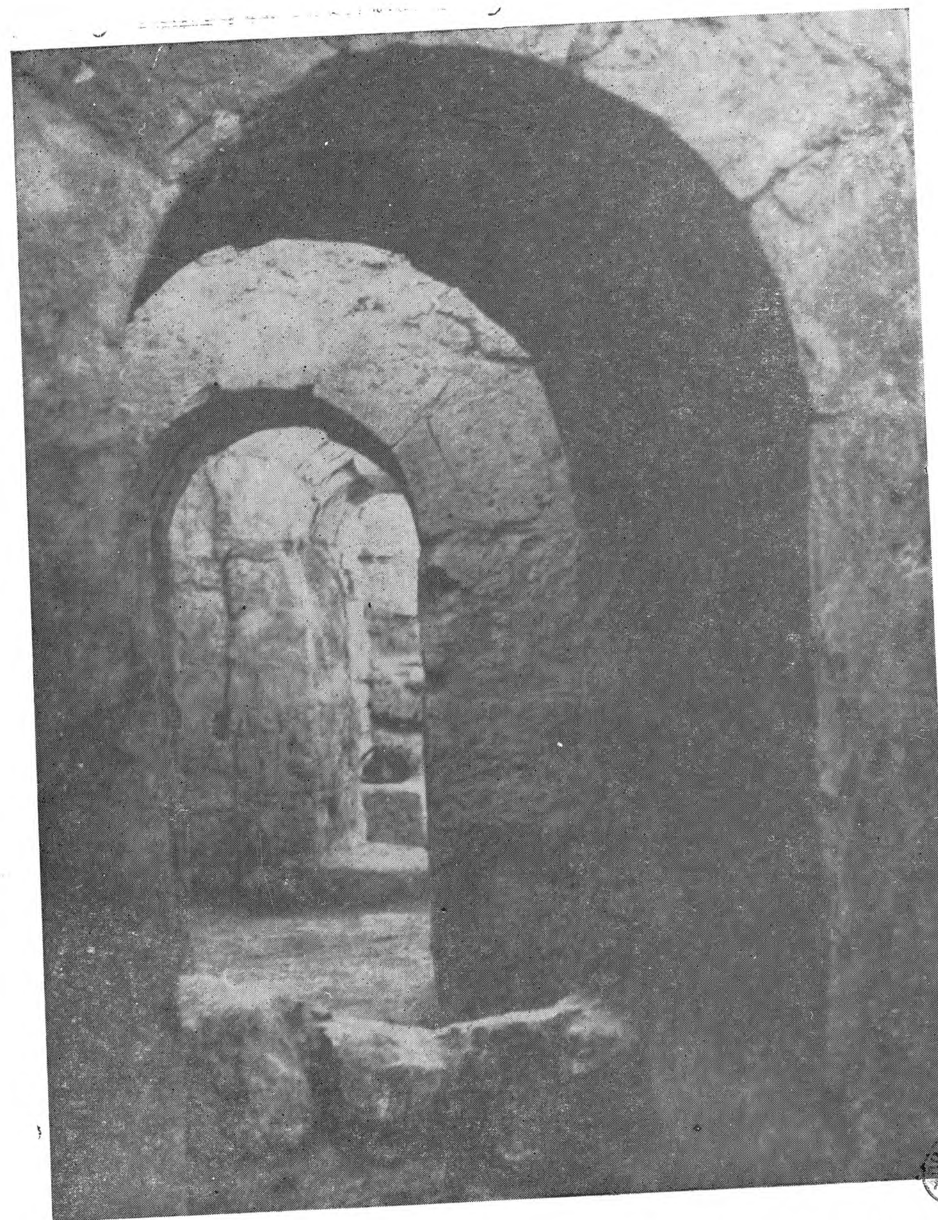




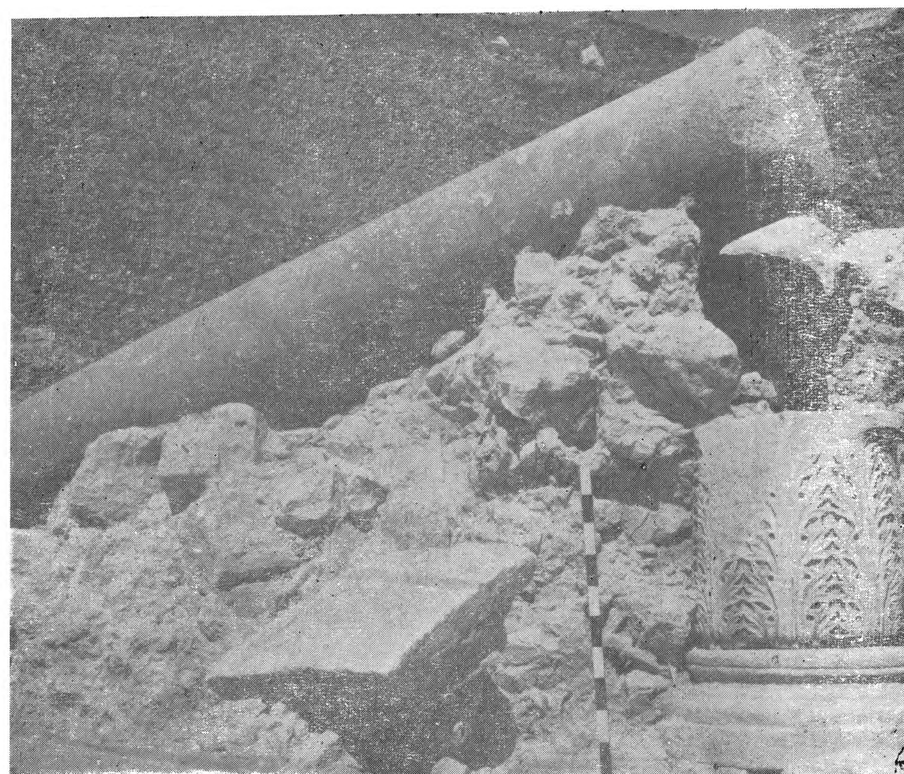
General view of the theatre at Period III.



1. Northern pedestal, fixed into the paving slabs of the orchestra.



2. Southern part of the surrounding corridor divided by the walls with the arches.

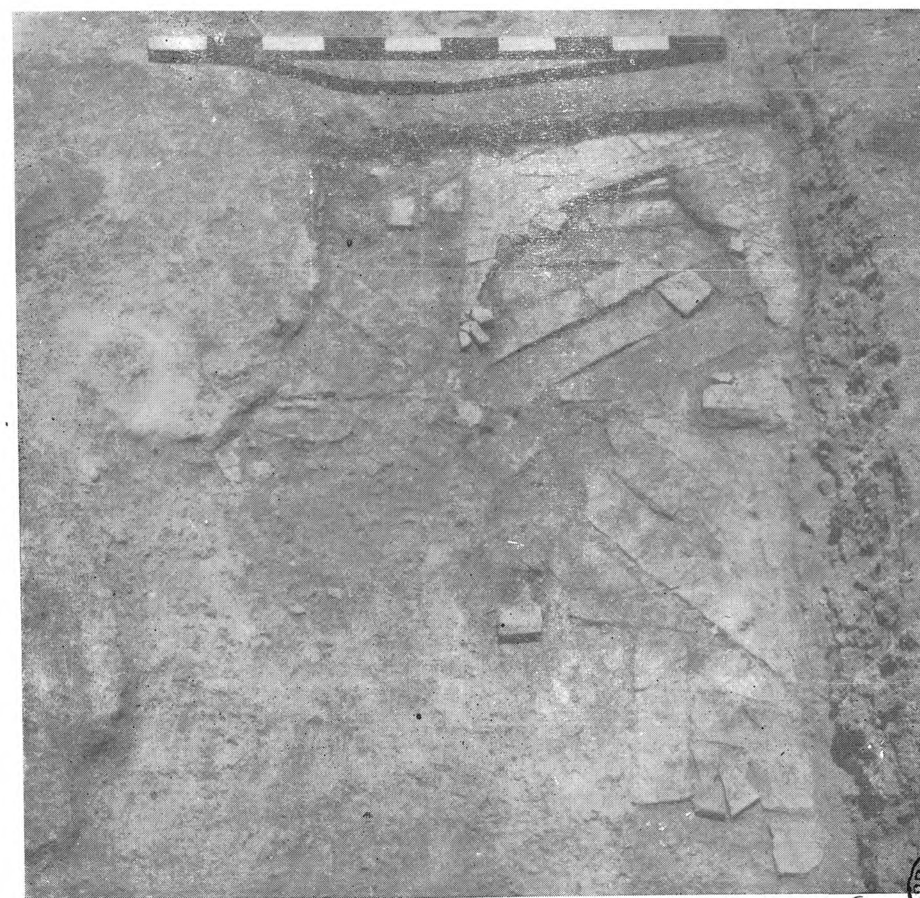


1. Southern acanthus-base (during the uncovering).





2. Northern part of the entrance-hall mosaic.



1. Uncovered fragment of an older pavement at the southern side-room of the entrance-hall.

Pl. XIV (*b*)



2. Clay container at the corner of the room IV of the corridor

DIX CAMPAGNES (1960 À 1970) DE TRAVAUX D'ANASTYLOSE, DE RECONSTITUTION ET DE PROTECTION DANS L'ENSEMBLE DU "HEB-SED" AU COMPLEXE MONUMENTAL DE LA PYRAMIDE A DEGRÉS

PAR

JEAN-PHILIPPE LAUER

J'avais rendu compte dans la présente revue [1] de la reprise, en fin du printemps 1960, des travaux de reconstitution dans le complexe funéraire du roi Zoser à Saqqarah, grâce à la haute et bienveillante compréhension de S.E. le Dr. Saroit Okacha, alors Ministre de la Culture et de l'Orientation nationale. Ces travaux, qui m'avaient été confiés depuis 1927, avaient, en effet, dû être interrompus par les hostilités de novembre 1956.

Il s'agissait alors essentiellement d'opérer le sauvetage des importants vestiges du remarquable ensemble de *heb-Sed* compris dans l'enceinte de la Pyramide à degrés, qui se dégradaient dangereusement, et d'entreprendre la reconstitution suivant les principes de *l'anastylose* [2] des différents types d'édifices archaïques en matériaux légers, qui avaient été transposés là par Imhotep dans la pierre, et dont j'avais pu établir, il y a nombre d'années, les restitutions théoriques [3].

La reconstitution du type de chapelle à toiture arquée et à fines colonnes cannelées, inconnu par ailleurs dans l'architecture égyptienne, apparaissant entre autres particulièrement souhaitable, c'est par elle que nous avions décidé de commencer l'œuvre projetée.

---

(1) Cf. *A.S.A.E.*, t. LVII, p. 43-47 et pl. I à IV bis.

(2) Cf. J.-Ph. Lauer, *Principes appliqués aux restaurations des monuments de Zoser à Saqqarah*, dans *Bull. Inst. d'Egypte*, t. XXXVIII, fasc. I, p. 19-30, ainsi que *Restaurations et "anastylose" dans les monuments du roi Zoser...* (1927-1947), dans *A.S.A.E.*, t. XLVIII, p. 351-366, et pl. I-III.

(3) Cf. J.-Ph. Lauer, *La Pyramide à degrés. L'architecture*, t. I et II, Le Caire, 1936.

Les travaux de reconstitution de l'une des chapelles de ce type, située immédiatement au Nord du seul de leurs soubassements qui fût intégralement conservé, avaient été effectivement engagés en mai 1960 (1). Ils permirent au cours d'une courte campagne de seulement sept semaines d'en compléter le soubassement jusqu'à sa hauteur d'origine de 4 coudées (soit près de 2m, 10). Ce soubassement comporte une chambrette-sanctuaire avec simulacre de porte ouverte et petite niche voûtée en naos au-dessus de laquelle un linteau ancien put être replacé (2). Ces travaux furent poursuivis au cours des campagnes suivantes.

1ère Campagne (hiver 1960-61).

A la reprise du chantier en novembre 1960, nous aurions voulu faire porter le principal de nos efforts sur la reconstruction de la façade principale ornée de 3 colonnes cannelées. Malheureusement, n'ayant disposé que par intermittence de l'ouvrier mouleur spécialiste qui nous était indispensable pour exécuter en pierre agglomérée les différents tronçons manquant à ces colonnes, la progression du travail s'en trouva considérablement ralentie et la recomposition de la façade ne put atteindre ainsi qu'en partie la 5ème assise au-dessus du soubassement.

Dans ces conditions, je dus affecter principalement mes tailleurs et ajusteurs de pierres au remontage du mur de la façade postérieure (voir pl. I, *a* et *b*), qui est nue jusqu'au tore arqué situé à 0m, 84 au-dessous de la ligne incurvée de son faîtage, et pour laquelle nous avons décidé de n'employer au-dessous de ce tore que des pierres neuves (3) ; cela afin de réserver à la recomposition de la façade principale à colonnes tous les blocs anciens dont nous pourrions disposer.

(1) Cf. notre rapport dans *A.S.A.E.*, t. LVII, p. 45-47.

(2) Cf. *ibidem*, pl. II à IV bis.

(3) Mais dès que ces pierres sont mises en œuvre, nous les patinons artificiellement en les frottant avec un chiffon imbibé de terre argileuse diluée dans de l'eau. La teinte ainsi obtenue est très voisine de celle des blocs anciens.

Parallèlement à ces travaux sur les deux façades Est et Ouest de la chapelle, la consolidation et la réfection des murs constituant le couloir d'accès en chicane vers le petit sanctuaire disposé dans la façade orientale était entreprise (voir pl. II, *a*). C'est ainsi qu'à la partie inférieure du simulacre de porte ouverte de l'entrée nous avons reconstitué le gond et la crapaudine, qui avaient été détruits. Pour l'exécution de la crapaudine nous avons pris un moulage de celle, au contraire, bien conservée à la chapelle voisine du côté Sud, et avons coulé ensuite en pierre agglomérée l'élément nécessaire. Quant aux simulacres de gond et de crapaudine supérieurs, ils furent reconstitués dans la pierre selon le modèle des exemplaires recueillis au cours des fouilles et ayant appartenu à des simulacres de portes semblables (voir pl. II, *b*).

En ce qui concerne, enfin, le sanctuaire même de la chapelle, nous avons eu la chance de retrouver dans nos magasins, où nous l'avions entreposé, le fragment de pierre qui, comportant le simulacre en fort relief d'une crapaudine supérieure, avait précisément appartenu au bloc du couronnement du jambage Sud du vantail de la porte, auquel nous l'avons donc réincorporé. Quant au plafond de ce sanctuaire qui, d'après les quelques fragments recueillis à proximité, devait être composé de blocs de pierre placés de champ, et imitant chacun à sa partie inférieure deux petits rondins parallèles, nous l'avons reconstitué en blocs de béton armé enrobé de pierre agglomérée reproduisant l'aspect de ces rondins.

2ème Campagne (fin d'Octobre 1961 à fin Février 1962).

Ayant, durant cette campagne, disposé de façon continue de l'ouvrier mouleur qualifié, Ahmed Abdel Radi, qui nous est indispensable pour reconstituer en pierre agglomérée les tronçons de remplacement des tambours manquant aux 3 colonnes cannelées de la façade principale dont nous avions entrepris *l'anastylose*, cette dernière put progresser de façon beaucoup plus appréciable.

Le niveau de 3 m, 10 au-dessus du soubassement, haut lui même de 2m, 10, fut atteint sur la colonne Nord à sa quatorzième assise, après y avoir replacé six tambours anciens, dont une série de cinq se faisant suite.

La colonne centrale fut portée, d'autre part, à sa douzième assise avec cinq tambours anciens ; un sixième lui appartenant n'ayant pu lui être incorporé, vu son trop mauvais état de conservation, fut moulé en pierre agglomérée.

Quant à la colonne méridionale, elle atteignit alors une assise de plus que sa voisine, soit la treizième avec également cinq tambours anciens.

Tandis que les niveaux de ces colonnes étaient ainsi portés en moyenne aux 3/5 de leur hauteur d'origine (pl. III, *a*) nous devions remonter en même temps le mur de façade où elles se trouvent engagées. Pour cette recomposition du mur, nous avons utilisé dans toute la mesure du possible des blocs anciens, à patine plusieurs fois millénaire. Mais ces blocs se raréfiant, hélas ! au fur et à mesure de la progression de nos reconstitutions, force nous est de les combiner maintenant avec quelques pierres neuves.

Sur la façade postérieure, poursuivant le travail de reconstruction entrepris en pierre neuve au cours de la campagne précédente, le niveau de 5 m, 30 fut atteint à la vingt-cinquième assise. (voir pl. I, *b*).

En ce qui concerne les murs constituant le couloir d'accès à la chapelle sur sa face orientale, l'assise couronnant le mur Sud, où se trouve le simulacre d'entrée ouverte, fut complétée par de la pierre agglomérée, afin de lui assurer une protection plus efficace contre les intempéries (voir pl. II, *b*) Sur le mur orienté Nord-Sud, qui forme écran entre l'entrée et le sanctuaire de la chapelle, trois blocs de couronnement anciens avec petite moulure en tore furent replacés.

Quant au mur Nord, dont les assises inférieures avaient été détruites en parement où elles comportaient un simulacre de barrière de bois, sculpté en haut-relief dans la pierre [1], nous avions rétabli ces assises en faisant sculpter dans des pierres neuves une barrière semblable (cf pl. IV, *a* et *b*). Nous y avons reconstitué, en outre, en béton et pierre agglomérée

[1] De nombreux exemples de ces barrières plus ou moins bien conservés ont été retrouvés encore en place sculptés sur les murs qui séparent les couloirs d'accès en chicane des différentes chapelles à toiture arquée et à colonnes cannelées. Cf. J.-Ph. Lauer *Pyr. à deg.* II, pl. LVIII, 1, LIX, coupe A, LXV, 3, et XCI, ainsi que Firth-Quibell, *Step Pyr.*, II, pl. 62.

sur une hauteur de 0 m, 70 correspondant aux trois premières assises, le jambage à face convexe qui saillait de ce mur vers le Sud ; ce tronçon nouveau sert de support à deux blocs anciens que nous avions pu identifier comme appartenant respectivement à la quatrième et à la sixième assise et que nous avons raccordés de la même façon (voir pl. IV, *b*).

Enfin, nous avions commencé à entreprendre la protection ou la réfection des murs bas précédant cette chapelle et ses voisines, en remplaçant ou recouvrant, selon leur état, les pierres de leur assise supérieure, qui s'altèrent, par des blocs moulés en béton et pierre agglomérée. L'assise supérieure, qui offre, en effet, beaucoup plus de surface exposée aux intempéries, est par là même plus rapidement menacée de destruction, et c'est elle qu'il convient essentiellement de préserver ; en particulier, les inégalités de taille des lits supérieurs mis à nu offrent autant de réceptacles à l'eau de pluie, ce qui contribue ensuite à faire éclater la pierre brusquement échauffée au soleil.

3ème Campagne (fin Novembre 1962- à fin Mars 1963).

C'est au cours de cette troisième campagne que nous sommes parvenus à achever la façade principale de cette chapelle à toiture arquée. Les fûts des trois fines colonnes cannelées qui ornent cette façade ont été recomposés à peu près pour moitié d'éléments anciens et d'éléments nouveaux refaits en béton revêtu de pierre agglomérée. Quant aux chapiteaux, ils sont tous trois anciens. (voir pl. III, *b* et V *b*). Mais, sur la colonne de droite, la plus au Nord, nous avons dû, faute de mieux, utiliser l'un des chapiteaux inachevés qui ont été retrouvés dans la cour du "Heb-Sed" ; le trou destiné, sans doute, à la fixation du support en bois d'une enseigne de divinité ou de nome n'y a pas encore été foré, et les cannelures des deux feuilles d'encadrement ne sont qu'ébauchées.

En ce qui concerne les tambours anciens qui ont été incorporés aux colonnes, ils se répartissent ainsi (n^os d'assises comptés à partir du soubassement) :

Colonne Sud : aux assises n°s 3, 4, 8, 12, 13, 16, 19 et 21.

Colonne centrale : aux assises n[os] 4, 6, 10, 11, 12, 15, 19, 20 et 21.

Colonne Nord : aux assises n[os] 5, 10, 11, 12, 13, 14, 18 et 21.

Quant au bandeau-corniche qui couronne la façade, il a pu être recomposé entièrement d'éléments anciens, ceux-ci provenant, bien entendu, de plusieurs chapelles semblables.

La façade de proportions très élégantes (voir pl. V, *b*) s'élève au-dessus du soubassement à une dizaine de coudées de hauteur (soit à environ 5 m, 25) à son point culminant, chiffre correspondant ainsi au rayon de l'arc que décrit la partie centrale du faîtage.

La recomposition par *l'anastylose* de cette façade, que nous avons ainsi pu mener à bien (pl. V, *b*), est d'une grande importance pour l'histoire de l'architecture et de la construction en pierre, puisque cet édifice est la transposition dans la pierre d'un type de pavillons qui devait encore en de certaines occasions, comme celle de la fête *Sed*, se construire en bois au temps de la IIIème dynastie, et qui dérivait lui-même d'un type d'ædicules beaucoup plus anciens remontant à l'époque prédynastique et construits en roseaux. Cette origine explique la forme arquée de leur toiture qui se retrouve précisément dans l'écriture hiéroglyphique sur le schéma du pavillon de fête, le signe *sḥ*.

Dans la transposition en pierre de Saqqarah, les éléments de bois sont encore nettement exprimés tant par les colonnes mêmes, avec leurs fûts cannelés qui existaient auparavant en bois, et avec l'abaque de leurs chapiteaux représentant manifestement le bout d'une poutre supportée par la colonne, que par le bandeau-corniche qui, indubitablement, figure un fort chevron arqué.

En outre, Herbert Ricke [1], a suggéré de voir, dans les deux feuilles cannelées encadrant cet abaque du chapiteau, la stylisation de deux échantignoles de bois qui auraient contribué à empêcher le déversement sur la colonne de la poutre

(1) Cf. H. Ricke, *Beiträge zur Aegyptischen Bauforschung und Altertumskunde*, H. 4 (Zürich, 1944), p. 80, fi[illegible]9.

supportant les chevrons de la toiture. Mais il serait également possible qu'elles aient simplement stylisé la retombée des liens végétaux maintenant l'assemblage de cette poutre sur la colonne.

D'autre part, parallèlement à ces travaux *d'anastylose* sur la façade principale de la chapelle nous avions, après avoir rehaussé la façade postérieure de deux assises au-dessus du niveau atteint au cours de la campagne précédente, procédé à la recomposition du tore arqué qui se trouve à 60 centimètres au-dessous de sa crête (voir pl. VI, *a* et *b*). Tous les blocs constituant ce tore, sauf deux, sont anciens, et la majorité d'entre eux, soit treize sur dix-huit qui en forment la partie centrale [1], ont appartenu à la même chapelle. L'arc que décrit ce tore est légèrement plus aplati que celui du bandeau-corniche de la façade principale, son rayon étant de 11 coudées (= 5 m, 76) au lieu de 10.

Enfin, sur les petits murs en chicane précédant les différentes chapelles de l'Ouest, disparues en majeure partie, notre programme de protection et de réfection de l'assise supérieure fut poursuivi.

4ème Campagne (mi-Novembre 1963 à mi-Mars 1964).

a) *Chapelle à toiture arquée.*

Nous pensions pouvoir, au cours de cette quatrième campagne, faire porter nos efforts principalement sur l'achèvement de la façade postérieure de cette chapelle, dont la façade principale avait été terminée au début du printemps 1963 ; mais le retard apporté à la livraison des pierres un peu plus grosses qui nous étaient indispensables, et que nous avions dû attendre trois mois, ne nous le permit pas. Néanmoins, les éléments d'un peu plus de la moitié de la crête de cette façade postérieure (parmi lesquels cinq blocs anciens) ayant pu être mis en place, le caractère très particulier de celle-ci apparut dès ce moment. La seule ornementation y est constituée par le tore arqué qui souligne la courbure du couronnement dont le profil est en léger surplomb (pl. VII, *a* et *b*).

(1) Cf. J.-Ph. Lauer, *Pyr. à deg.*, I p. 141 et fig. 140.

D'autre part, la reconstitution des deux façades latérales de la chapelle, qui devaient émerger au-dessus du massif de blocaille servant de bourrage à cette série d'édifices factices de caractère symbolique, fut amorcée.

Enfin, au-dessus du soubassement parvenu intact jusqu'à nous [1], qui appartient à la chapelle à toiture arquée située immédiatement au Sud de celle dont nous achevions la reconstitution, nous avons rehaussé légèrement le niveau de ses colonnes et de son ante Nord, dont nous avions amorcé la reconstruction des premières assises au cours de la précédente campagne.

(b) *Pavillon à toiture plane et à tores d'angles.*

C'est en janvier 1964, que nous avions entrepris *l'anastylose* et la réédification de ce pavillon de type différent, qui limite vers le Sud la série des chapelles à toiture arquée disposées sur le côté occidental de la "cour du *Heb-Sed*". Ce pavillon, qui n'était conservé au plus haut que jusqu'à sa cinquième assise (voir pl. VIII, *a*), atteignit alors en fin de campagne la onzième sur une partie de sa façade principale vers l'Est.

Quant au sanctuaire qui, dans ce pavillon, est disposé latéralement, au Nord, et possède un simulacre de porte ouverte dont seuls subsistaient des éléments des trois premières assises, il fut remonté en moyenne sur les 3/4 de sa hauteur. Nous y avions recomposé la petite niche à offrandes qu'il comportait, et replacé sur la paroi Ouest de celle-ci un bloc au lit supérieur profilé suivant la courbure caractéristique des voûtes de ces niches, qui est semblable, nous l'avons dit, à celle des *naoï*.

Au tore d'angle N.-E., dont les cinq premiers tambours étaient en place, nous n'avons malheureusement pas retrouvé d'autres éléments. Il a dû ainsi être reconstitué en blocs de béton enrobé de pierre agglomérée, ce qui fut alors fait jusqu'à la dixième assise.

---

(1) Cf. J.-Ph. Lauer, *Pyr. à deg.*, II, pl. LXII, 3.

Enfin, le simulacre de porte fermée, disposé sensiblement au centre de la façade principale, passa de la quatrième assise à la neuvième, sauf à son jambage Sud qui en resta à la huitième.

En ce qui concerne la façade latérale de l'édifice vers le Sud, celle-ci est plus étendue que la façade orientale, dont il vient d'être question. Mais, comme elle donne sur un passage étroit, et n'est donc pas visible avec recul, nous avions décidé de n'utiliser pour sa reconstruction que des pierres neuves, préférant réserver, ainsi que nous l'avons fait pour le pavillon à toiture arquée, les quelques pierres anciennes, dont nous disposons, à la façade principale sur la "cour du *Heb-Sed*". Aussi, la non livraison des pierres en temps utile ne nous permit-elle pas de remonter dès l'hiver 1964 cette façade méridionale de façon appréciable. Nous dûmes nous contenter d'y placer l'assise de blocs moulés en béton enrobé de pierre agglomérée, que nous interposons pour marquer le départ de la réédification.

(c) *Protection des murs qui s'altèrent.*

Le programme de protection et de réfection des murs, dont les assises supérieures s'altèrent gravement par les intempéries, que nous avions entrepris au cours des campagnes précédentes principalement dans la partie S.-O. de la "cour du *Heb-Sed*", a été poursuivi et étendu au couloir d'accès à cette dernière depuis la colonnade d'entrée. Il importait, en effet, de ne pas laisser disparaître la trace de ce couloir encore marquée de place en place par quelques pierres des revêtements de ses murs Est et Ouest qu'il y avait ainsi lieu de renforcer par l'adjonction de blocs d'accompagnement ou de protection.

5ème Campagne (mi-Novembre 1964 à mi-Mars 1965).

(a) *Chapelle à toiture arquée.*

La crête de la façade postérieure vers l'Ouest fut enfin complétée [1], tandis que les murs épaulant cette façade vers l'Ouest et vers le Sud étaient modifiés et amplifiés de

---

(1) Au total 8 blocs anciens y ont été replacés, dont les deux blocs de l'angle N.-O.

façon à ne plus donner l'impression de marches d'escalier régulières (comparer les pl. VI, *b* et VII). Quant aux raccordements latéraux des deux façades orientale et occidentale de l'édifice, ils furent effectués sur une hauteur de deux assises; mais au-dessus de celles-ci les trois assises supérieures, qui comportent le tore horizontal et la crête en surplomb, ne purent être qu'amorcées de part et d'autre.

(b) *Pavillon à toiture plane et à tores d'angles.*

C'est sur la recomposition de ce second édifice (pl. VIII, *a*) que nous fîmes porter essentiellement nos efforts, et en fin de campagne ce pavillon, dépassant 3 m, 50 de hauteur sur la majeure part de ses deux façades Est et Sud, commençait à se dégager nettement des ruines avoisinantes (pl. VIII, *b*).

Son sanctuaire dont, nous l'avons vu, l'accès est latéral, fut alors parachevé avec son simulacre de porte ouverte, sa niche d'offrandes et son plafond en imitation de petits rondins.

Sur la façade principale vers l'Est, où le tore d'angle N.-E. fut remonté jusqu'au sommet de la 13 ème assise, à près de 3 mètres de hauteur, une majorité de blocs anciens put être employée, comme nous l'avions fait pour la façade à colonnes cannelées de la chapelle à toiture arquée. Au-dessus du simulacre de porte fermée de l'entrée, nous avons dû néanmoins, comme sur l'entrée latérale du sanctuaire face au Nord, retailler dans un bloc nouveau le linteau avec sa moulure d'encadrement en tore.

Sur la façade méridionale, où nous avons été contraints d'employer des blocs nouveaux, un résultat particulièrement important fut obtenu par *l'anastylose* du tore d'angle S.-O. Le premier élément qui, après quatre lacunes put être réincorporé à ce tore d'angle (à sa 15 ème assise), présentait, en effet, à son lit supérieur la trace du départ de la façade méridionale. Nous avons donc là le niveau de base de celle-ci sur la terrasse au contour en quart de cercle, d'où émergeait le pavillon (voir pl. X, *a* et *b*). Le niveau supérieur de cette terrasse, ainsi déterminé de façon précise à 3 m, 10 au-dessus de l'assise de base formant trottoir, se trouve très notablement abaissé par rapport à notre dessin de restitution publié en

1936, où nous n'avions pu le fixer qu'arbitrairement à 5 m, 20 environ [1]. Nous avons là un excellent exemple des rectifications que peuvent permettre d'apporter à des restitutions théoriques de pareils travaux *d'anastylose*.

Un second élément de ce tore d'angle S.-O. fut, en outre, replacé à la 17 ème assise dont le lit supérieur atteignit alors la hauteur de 3 m, 55 (pl. X, *a*).

6ème Campagne 1965-1966 (mi-Novembre à mi-Mars).

(a) *Chapelle à toiture arquée.*

Sur les façades latérales Sud et Nord, qui devaient émerger de la terrasse formée par les noyaux juxtaposés de ces différents édifices factices dont le rôle était ici, rappelons-le, purement symbolique, la troisième assise, qui comportait un tore horizontal, fut recomposée. Quelques éléments anciens purent y être incorporés, mais les pierres nouvellement sculptées y sont bien plus nombreuses. Au-dessus de cette assise deux autres, qui forment la crête en léger surplomb, furent reconstituées sur la face méridionale, sauf une large brèche laissée intentionnellement afin d'éviter le contraste un peu choquant qu' offrirait une reconstitution absolument intégrale au milieu des nombreuses ruines adjacentes (voir pl. VII, *a* et *b*).

Le même travail, qui ne put être achevé sur la face Nord durant cette campagne, le sera au cours de la suivante.

Par ailleurs, sur le mur limitant en façade vers l'Est le couloir en chicane, qui conduit, au sanctuaire de la chapelle à colonnes cannelées située immédiatement au Sud de celle que nous avons recomposée, la niche basse a été complétée : la voûte de naos, qui la recouvrait et dont la trace de la naissance était encore visible, ainsi que le linteau de façade ont été reconstitués permettant de replacer au-dessus plusieurs blocs, dont une pierre ancienne de l'assise de couronnement ornée d'un petit tore horizontal.

(1) Cf. J.-Ph. Lauer, *op. cit.*, II, pl. LVIII, 2,à droite.

(b) *Pavillon à tores d'angles et à toiture plane.*

Six nouvelles assises purent être ajoutées à la façade principale vers l'Est qui atteignit alors à 4 m, 80 la 23 ème assise sur son tore d'angle S.-E. où 3 tambours anciens ont retrouvé leur place (voir pl. IX, *a*) au-dessus du tronçon de 5 assises encore conservé in situ.

La façade latérale vers le Sud beaucoup plus étendue que la précédente ne put être remontée que jusqu'à la 21 ème assise à 4m, 35 de hauteur moyenne, sauf à proximité des deux tores d'angles, où la 23 ème assise fut églement atteinte à celui du S.-E. et la 22 ème à celui du S.-O.

Quant à la façade postérieure vers l'Ouest, les six premières assises au-dessus du niveau de la terrasse déterminé au cours de la campagne précédente purent être entièrement remontées, tandis que la septième était amorcée à partir des deux tores d'angles N.-O. et S.-O. et la huitième seulement à partir du tore d'angle S.-O (voir pl. X, *b*). Si à ce dernier trois autres tambours anciens ont pu retrouver leur place d'origine, nous ne pouvons, au contraire, assurer que les quatre tambours incorporés au tore d'angle N.-O. lui aient effectivement appartenu ; mais comme il ne pouvait être question de les replacer ailleurs, nous avons préféré les remployer là.

(c) *Mur de terrasse au contour en quart de cercle.*

Ce magnifique mur de revêtement arrondi face au Sud-Ouest, encore très bien conservé à ses assises inférieures, se dégradait au contraire fâcheusement quelques assises plus haut (voir pl. X, *a*). Aussi a-t-il été nécessaire d'entreprendre la restauration de celles-ci pour conserver cet exemple unique dans l'architecture de l'Ancien Empire. Pour l'exécution de ce délicat travail de réfection l'emploi de blocs moulés en béton enrobé de pierre agglomérée a été jugé préférable, et les blocs des trois assises supérieures dégradées furent ainsi remplacés en majeure partie (voir pl. X, *b*).

7ème Campagne (mi-Novembre 1966 à mi-Mai 1967).

C'est au cours de cette campagne que je pus obtenir que le jeune architecte Salah El-Naggar, récemment entré au Service des Antiquités, fût affecté à Saqqarah pour m'assister

dans la direction des travaux de reconstitution et de protection entrepris au complexe monumental du roi Zoser, où sa collaboration allait me devenir particulièrement précieuse.

(a) *Pavillon à tores d'angles et à toiture plane.*

C'est sur l'angle S.-E. de sa façade principale que fut atteint le sommet de l'édifice, où purent être replacés des éléments anciens de sa crête au profil en surplomb si caractéristique (voir pl. IX, *b*).

Le niveau même du départ de cette crête nous fut donné par les *anastyloses* des deux tores d'angles S.-O. et S.-E. Celle du tore S.-O., en particulier, nous conduisit avec grande précision jusqu'à l'avant-dernière assise, grâce aux 8 éléments qui, malgré quelques lacunes intermédiaires, purent y retrouver leur place exacte ; mais l'assise de couronnement du tore, avec les retours horizontaux des petits tores d'accompagnement, ayant fâcheusement disparu, c'est un élément provenant d'un autre pavillon de ce type qui y fut placé. En revanche, cette pièce importante ainsi que les 2 tambours qui la précèdent immédiatement furent retrouvés pour le tore S.-E. Ainsi, par la combinaison des éléments dûment identifiés de ces deux tores d'angles, nous pouvons considérer comme certaine, à quelques centimétres près, la hauteur obtenue qui est de 6 mètres environ au sommet des tores. Au-dessus de ce sommet, il convient d'ajouter une douzaine de centimètres appartenant à la même assise, puis de 0m, 48 à 0m, 50 pour les deux assises à parement incliné en surplomb constituant la crête terminale [1], soit au total une soixantaine de centimètres. La hauteur du pavillon atteignait ainsi 6 m, 60 environ, soit 12 coudées 1/2.

Néanmoins, le tore horizontal, qui souligne la crête de l'édifice, n'avait pu être encore replacé que sur la façade principale, où 5 éléments sur les 7 qui le composent sont anciens. Sur les trois autres façades c'est seulement le niveau de pose de cette assise qui fut alors atteint.

---

(1) Cf. J.-Ph. Lauer, *op. cit.* II, pl. LXVI, 1.

(b) *Mur arrondi en quart de cercle.*

C'est également au cours de cette campagne 1966-67 que put être rétabli à sa hauteur d'origine déterminée, nous l'avons vu, par l'*anastylose* du tore d'angle S.-O. du pavillon à toiture plane, ce mur si remarquable tant par son exécution impeccable que par sa conception même (voir pl. VII, *b*). Rappelons, en effet, le souci étonnant qu'eut Imhotep de supprimer un angle droit par cet arrondi qui décrit un quart de cercle parfait, uniquement dans le but de faciliter le passage symbolique des cortèges purement idéaux du *ka* royal au cours de ses fêtes *Sed* de l'au-delà. Il semble que l'on ait ainsi voulu conduire tout naturellement ces cortèges d'ombres vers la cour principale de la fête, en évitant de les rebuter par un trop brusque changement de direction.

(c) *Protection des pieds de statues situés dans le pavillon à tores d'angles de l'extrémité N.-O. de la "Cour du Heb-Sed".*

Les quatre paires de pieds de statues, deux grandes et deux petites, qui subsistent dans les vestiges de ce pavillon (1) et se trouvaient menacées de destruction totale par le passage des visiteurs en ce point, ont été abritées par une grande dalle de béton armé enrobé de pierre artificielle. En outre, les deux tores d'angles qui avaient disparu à la base de la façade de ce pavillon, et dont l'existence n'était plus marquée que par leurs fondations, ont été réamorcés sur deux assises; le second élément du tore d'angle N.-E. y a retrouvé sa place d'origine.

8ème Campagne (mi-Novembre 1967 à mi-Mars 1968).

(a) *Pavillon à tores d'angles et à toiture plane.*

Le tore horizontal qui souligne la crête de la construction, et que nous avions replacé sur la façade principale vers l'Est en 1966-67, fut alors rétabli sur les façades méridionale et occidentale (voir pl. XI, *a*). Les éléments anciens, dont nous disposions en plus des blocs de sommet de tores que nous avons pu placer sur les deux angles N.-O et S.-O, ont été réservés à la façade occidentale plus exposée aux regards et

(1) Cf. Firth-Quibell, *Step Pyr.*, II, pl. 63, en bas.

où nous n'avons eu qu'un seul élément nouveau à incorporer en raccord. Quant au côté Nord, où le haut du pavillon seulement émerge de la terrasse avoisinante, le tore ne fut qu'amorcé sur 2m, 50 à partir de l'angle N.-E., et sur 1m, 60 à partir de l'angle N.-O., l'élément replacé à la suite de ce dernier angle étant ancien.

En ce qui concerne la crête proprement dite, qui comporte deux assises, elle ne put encore être rétablie que sur la façade principale vers l'Est (voir pl. XIII, *a*). Néanmoins, nous avions obtenu le résultat essentiel recherché, à savoir la recomposition de la façade de ce type de construction archaïque à toiture horizontale, dont la crête végétale n'est pas encore traduite dans la pierre par une corniche à gorge, mais stylisée par un simple profil en surplomb, rectiligne, ou parfois à peine concave. Dès ce moment, il devint donc loisible d'admirer dans la "cour du *Heb-Sed*" la transposition en pierre réalisée, il y a quelque 47 siècles par Imhotep, des deux principaux types de sanctuaires, celui à colonnes cannelées et à toiture arquée, et celui à tores d'angles et à toiture plane, que l'on édifiait respectivement en bois et en brique crue lors du *heb-Sed* au début de l'histoire égyptienne, et qui dérivaient eux-mêmes de prototypes en roseaux et en pisé ou clayonnage, en usage à l'époque prédynastique.

(b) *Protection des assises supérieures des murs qui s'altèrent.*

Cette oeuvre de protection nécessaire fut activement poursuivie au cours de cette campagne. En particulier, la réfection de la plate-forme à double escalier située vers l'extrémité méridionale de la cour, qui dût servir de base au double kiosque de *heb-Sed*, et dont les blocs de parement de l'assise supérieure et parfois aussi de la précédente se désagrégeaient sur la moitié de la périphérie (voir pl. XII, *a*). fut entreprise et menée à bien sur la face Ouest, l'angle N.-O. et une partie de la face Nord.

9ème Campagne (fin Novembre 1968 à fin Mars 1969).

(a) *Pavillon à tores d'angles et à toiture plane.*

Le résultat majeur a été l'achèvement de la recomposition de ce pavillon sur ses façades postérieure et latérales où une large brèche a simplement été laissée dans la crête

septentrionale la moins exposée aux regards, afin de limiter l'emploi de blocs nouveaux dont il convient de ne pas abuser dans ces reconstitutions (voir pl. XIII, *a*). En effet, les quelques éléments de crête dont nous disposions encore furent replacés sur la façade postérieure vers l'Ouest et sur son angle N.-O. [1]; sur les deux façades latérales force nous a été d'avoir recours à des pierres neuves.

Nous avons ainsi pu mener à bien, en appliquant les principes de l'*anastylose*, la reconstitution de ce second type de sanctuaires prédynastiques en matériaux légers, traduit ici en pierre (pl. XII, *b* et XIII, *a*), qui vient s'ajouter au type à fines colonnes cannelées et à toiture arquée, que nous avions recomposé antérieurement. Rappelons que le prototype de ce second groupe de sanctuaires, dont le schéma est demeuré parmi les hiéroglyphes (voir fig. 1), était un ædicule en clayonnage de roseaux ou de tiges de palmes, renforcé par des boudins végétaux aux angles et sous la crête constituée elle-même par les feuilles des roseaux ou des palmes qui se dressaient sur le pourtour d'une couverture végétale plane. Ce prototype fut ensuite transposé dans la construction en brique crue, où l'on conserva les boudins pour en protéger les angles. Ce sont ces boudins de protection que, dans la seconde transposition de ce type d'édifices, effectuée cette fois dans la pierre par Imhotep, il est convenu d'appeler en termes d'architecture des "tores d'angles", et que l'on retrouvera plus tard aux angles extérieurs des murs principaux des temples égyptiens et, en particulier, des pylônes.


Fig. 1

(b) *Les deux chapelles à toiture arquée et à colonnes cannelées comportant un escalier et une large niche à statue.*

En ce qui concerne les vestiges de ces chapelles situées entre les deux types de sanctuaires que nous avons ainsi reconstitués, nous avions jugé nécessaire, pour bien faire comprendre aux visiteurs qu'il y avait là toute une suite d'autres édifices analogues, d'entreprendre leur rehaussement au moins jusqu'au niveau supérieur des soubassements qui atteignait

(1) Y compris les deux blocs de cet angle, cinq éléments anciens ont été incorporés aux deux assises de la crête de cette façade Ouest.

environ 2m, 10. Sur ces soubassements il serait ensuite possible d'amorcer *l'anastylose* de quelques fûts de colonnes avec la base des façades où celles-ci se trouveraient engagées.

La première partie de ce programme fut réalisée presque entièrement, et il ne restait plus en fin de campagne qu'à placer l'assise du couronnement de ces soubassements, qui comporte un mince et élégant tore d'encadrement. De plus, le très bel escalier encore parfaitement conservé sur 7 marches curieusement inclinées, avec de très petites contremarches réduites à 5 ou 6 centimètres de hauteur, a été complété (voir pl. XIII, *a*) sous le contrôle direct de M. Salah el-Naggar par l'addition de trois nouvelles marches le rétablissant à sa hauteur d'origine, au niveau du sommet du soubassement où il donnait accès à une très vaste niche à statue. Enfin, les deux seules colonnes qui, situées respectivement à droite de l'escalier de chacune de ces deux chapelles, reposaient directement sur le sol et non sur les soubassements, furent remontées de quelques assises.

(c) *Le mur de chicane devant la chapelle à toiture arquée reconstituée antérieurement.*

Ce mur a été complété jusqu'à sa hauteur d'origine. Trois éléments anciens du jambage terminal à face convexe et à tore d'encadrement, dont celui du couronnement, y ont retrouvé leur place. Quant à l'assise même du couronnement de ce mur elle a pu être recomposée uniquement avec des blocs anciens (voir pl. V, *b*).

(d) *Chapelles de l'Est.*

Sur le côté oriental de la cour principale la reconstitution de l'un des douze ædicules semblables entre eux, qui se dressaient à partir de son extrémité Nord au temps de Zoser, et dont divers éléments des façades couronnées par des crêtes arquées recueillis à proximité immédiate m'avaient permis d'établir la restitution théorique [1], apparaissait également souhaitable. Il s'agit là, en effet, d'un troisième type de petits sanctuaires prédynastiques transposés dans la pierre.

Le travail fut commencé en janvier en un point où le plan de l'édifice proprement dit n'était plus marqué que par

(1) Cf. J.-Ph. Lauer, *op. cit.*, t. I, p. 142-143, et t. II, pl. LVIII, 3 et LXVI, 3 et 4.

quelques pierres en place, mais où les murs disposés en chicane qui la précèdent sont relativement bien préservés (pl. XV, *a*) et présentent à l'entrée un bel exemplaire de simulacre de porte ouverte avec gond et crapaudine ([1]).

Le soubassement de l'ædicule fut réédifié jusqu'à sa neuvième assise, et la recomposition de son petit sanctuaire disposé latéralement au Sud exécutée en majeure partie, avec son simulacre de porte ouverte et sa niche à offrandes où un linteau ancien a pu être replacé (voir pl. XIV, *a* et *b*).

10 ème Campagne (fin Novembre 1969 à fin Mars 1970).

(a) *Les deux chapelles à escalier* (*côté Ouest de la cour*).

La reconstitution entreprise des soubassements de ces chapelles, qui font suite vers le Nord au pavillon à tores d'angle, a été complétée par la pose de leur assise supérieure ornée d'une fine moulure horizontale en tore.

En ce qui concerne la première de ces deux chapelles à partir du Sud, les tambours que nous pouvons attribuer aux colonnes cannelées, qui étaient engagées dans sa façade, sont en nombre tout à fait insuffisant pour permettre d'en entreprendre l'*anastylose*. Aussi avons-nous décidé d'amorcer simplement, au-dessus du soubassement de la chapelle, sa façade sur 3 ou 4 assises, ce qui a été commencé, et de porter l'effort principal sur la recomposition de sa voisine. Nous possédons là, en effet, beaucoup plus d'éléments aussi bien des colonnes que de la corniche arquée avec les blocs de départ de celle-ci, de chacun de ses deux côtés.

Dès maintenant, les deux pilastres d'antes de cette seconde chapelle ainsi que les murs contigus atteignent respectivement les 8ème et 9ème assises au-dessus du soubassement (voir pl. XIII, *b*) où elles correspondent aux points les plus élevés de la reconstitution. Quant aux colonnes, seule jusqu'à présent la première d'entre elles, à partir du Sud, qui repose directement sur le sol (les autres partant du soubassement), est en cours d'*anastylose*; elle a atteint sa 15ème assise (pl. XIII, *b*). Pour les deux colonnes suivantes à replacer vers le Nord sur le soubassement il nous fallait,

([1]) Cf. *ibidem*, t. II, pl. LXIII, 3.

en effet, commencer par reconstituer les tronçons de fûts manquants à disposer au-dessous de leurs tambours retrouvés dont les niveaux ont été préalablement déterminés en fonction de leur diamètre. Ces tronçons, qui sont en cours d'exécution, ne pourront être mis en œuvre qu'au début de la campagne prochaine.

(b) *A l'estrade du heb-Sed.*

Le parement Nord de cette estrade aux approches de son angle N.-E., de même que son parement oriental, l'un et l'autre fort dégradés (pl. XII, *a*), ont été remis en état et complétés aux points où il y avait lieu de le faire (voir pl. XII, *b* et XIII, *a*).

Quant à la reconstitution du second petit escalier de trois marches, celui du Sud dont seules les fondations subsistaient en partie, elle vient d'être achevée ; la marche de départ, de forme arrondie très particulière, a été coulée en béton enrobé de pierre artificielle dans un moule pris sur la marche correspondante conservée à l'escalier Nord (voir pl. XII, *b*). Les deux marches suivantes ont été également reconstituées et il ne reste plus qu'à parachever les deux assises supérieures de l'estrade à son angle S.-E.

(c) *Aux chapelles de l'Est.*

La reconstitution de la chapelle, qui avait été commencée au cours de la campagne précédente a été activement poursuivie. Le soubassement s'élevant à 2m, 10 environ, comme à l'Ouest de la cour, ainsi que le petit sanctuaire qui y est disposé avec entrée latérale vers le Sud sont complètement achevés. Quant à la façade proprement dite qui, au-dessus de ce soubassement, doit comporter 21 assises jusqu'au départ de sa crête de couronnement arquée (soulignée par un tore présentant même courbure) dont nous avons plusieurs éléments à replacer ([1]), elle s'élevait en fin mars à la 9ème assise, soit à plus de 4 mètres de hauteur (voir pl. XV, *b*).

([1]) Cf. J.-Ph. Lauer, op. cit t. II, pl. LXVI, 3 et 4.

Au cours de l'automne, deux autres assises ont pu être remontées avant mon retour, sous la direction de M. Salah el-Naggar. Plusieurs blocs d'angles (voir fig. 2), qui présentent une petite saillie d'encadrement sur cette façade principale, ont été réincorporés à celle-ci : trois à l'angle N.-O., et deux à l'angle S.-O.

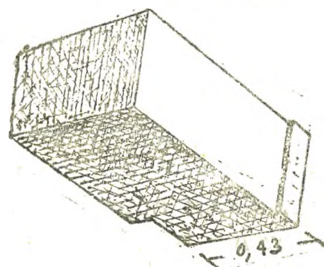
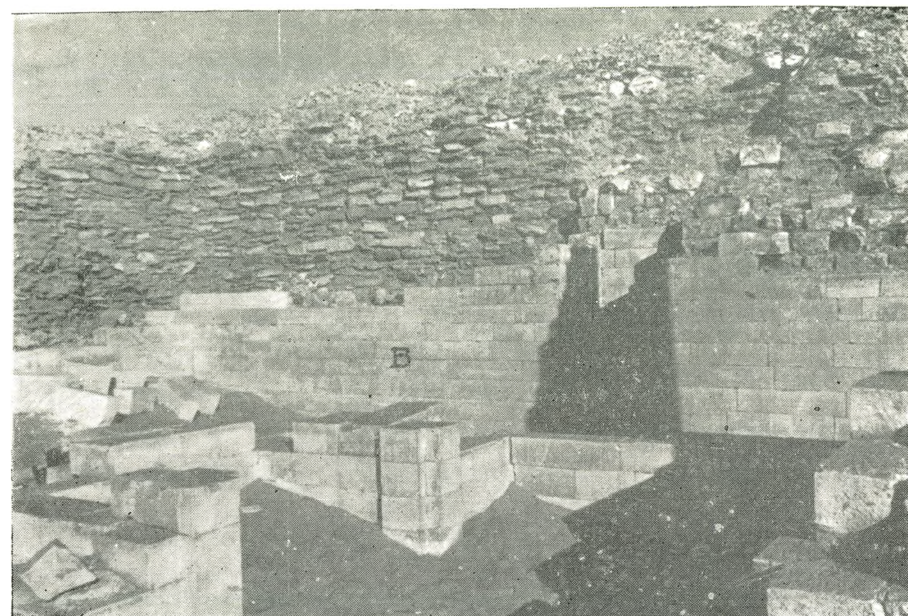


Fig. 2

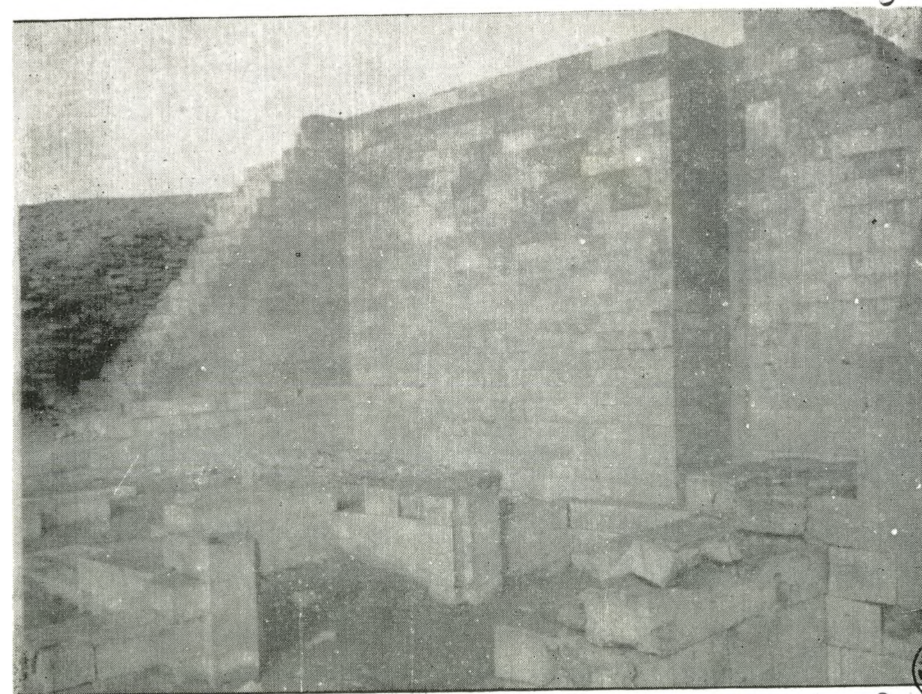
Enfin, la reconstitution des deux murs latéraux limitant l'accès en chicane à la chapelle et à son sanctuaire a été entreprise, en même temps que nous poursuivions la réfection des assises supérieures des petits murs conservés qui précèdent les différentes chapelles de l'Est, comme nous l'avons fait auparavant pour ceux précédant les chapelles de l'Ouest. [1]

JEAN-PHILIPPE LAUER

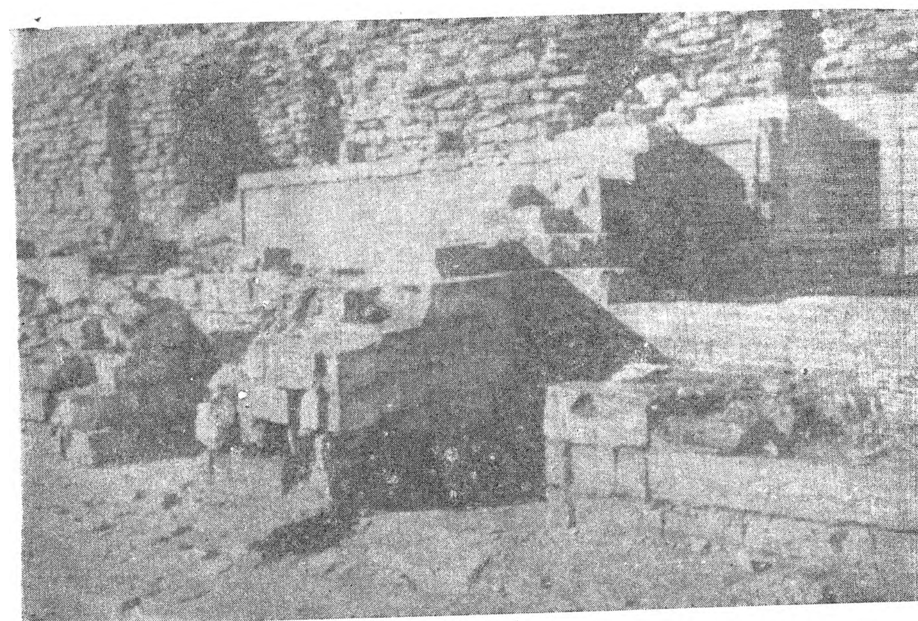
[1] Au sujet de ces divers travaux effectués depuis 1960 aux monuments du *Heb-Sed* dans le complexe de la Pyramide à degrés, on se référera d'autre part aux communications que nous avons faites à l'Académie des Inscriptions et Belles-Lettres *(J.-Ph. Lauer* dans *C. R. A. I. B. L.*, 1963, p. 301-309 ; 1966, p. 453-456 et pl. II, a ; 1967, p. 493-496 ; 1969, p. 460-463 ; 1970, p. 484-488), ou à la Société française d'Egyptologie (cf. *B. S. F.E.* n° 33, p. 9-13 ; n° 37-38, p. 31-38 ; n° 43, p. 14-16 et planche ; n° 47, p. 20-22 et pl. I ; n° 52, p. 15-17 et pl. III, A ; n° 56. p. II-14 et pl. I, A).



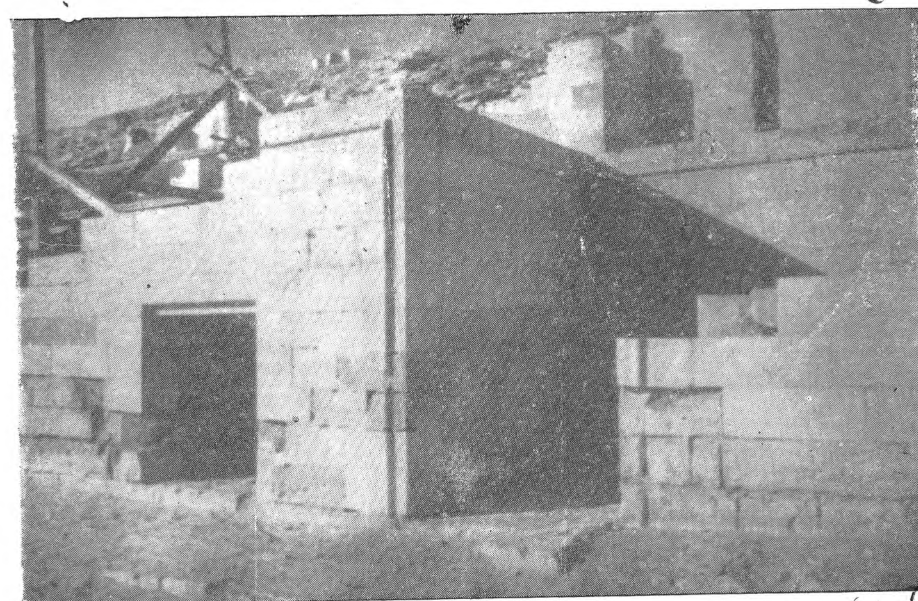
(*a*) En B, base de la façade postérieure (Ouest) de la chapelle à toiture arquée, avant reconstitution.



(*b*) Reconstitution de cette façade postérieure jusqu'au niveau du départ de sa crête arquée (février 1962).



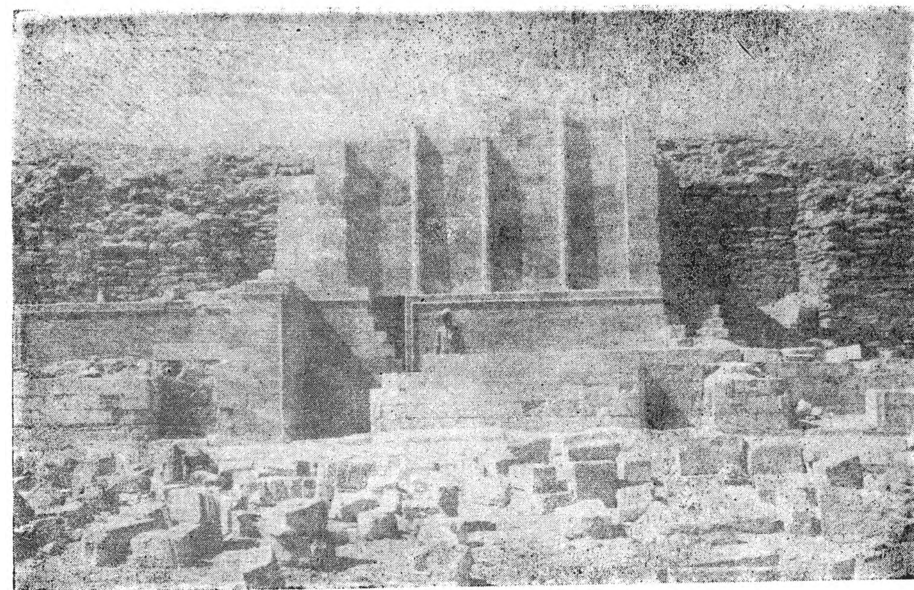
(*a*)



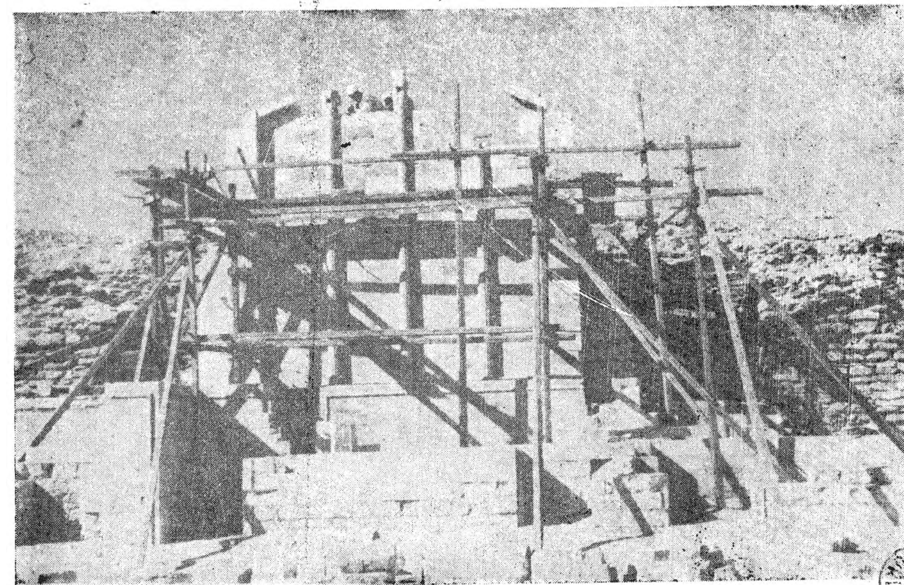
(*b*)

Le simulacre de porte et les murs du couloir en chicane précédant la chapelle à toiture arquée : (*a*) lors de la découverte ; (*b*) après restauration.

Pl. III



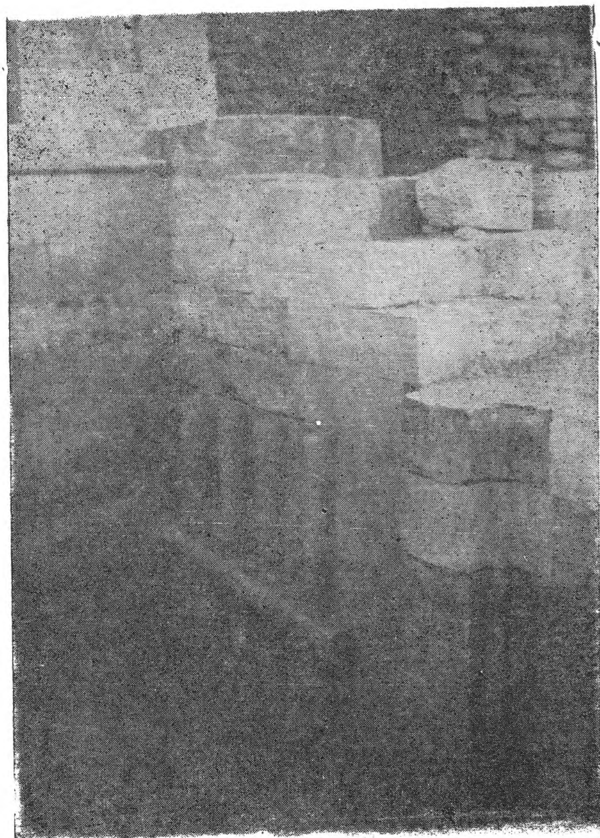
(*a*) Colonnes cannelées de la chapelle à toiture arquée en cours *d'anastylose* (février 1962).



(*b*) Pose des chapiteaux et de la corniche de cette chapelle (janvier 1963).



(*a*)



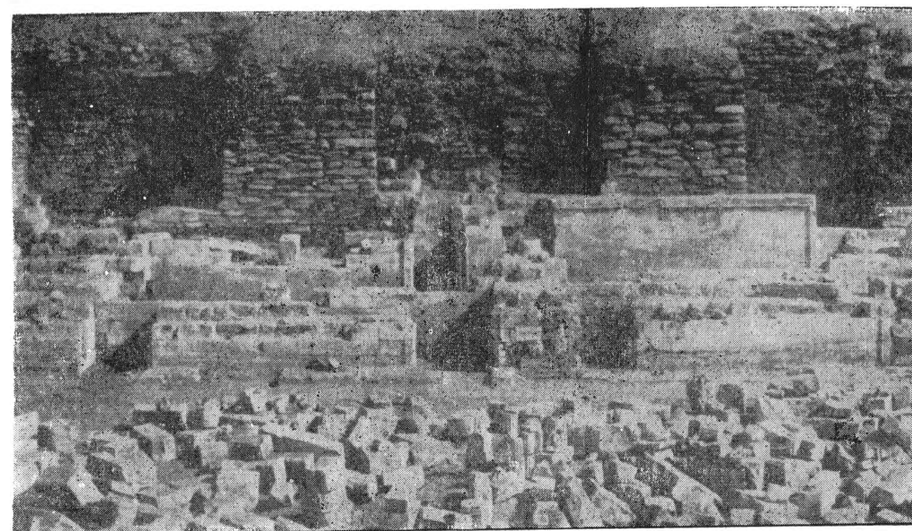
(*b*)

Mur nord du couloir en chicane de la chapelle à toiture arquée.

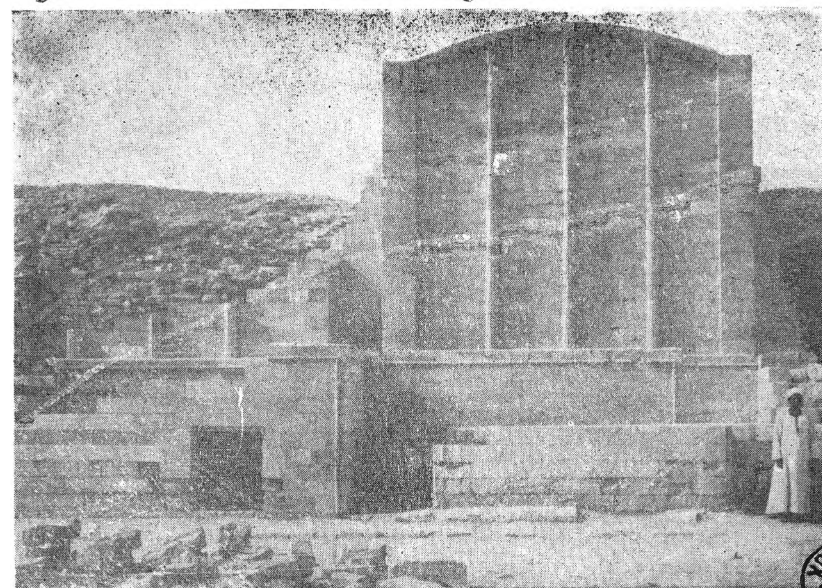
(*a*) Etat des vestiges au commencement de la reconstitution du simulacre de barrière.

(*b*) Etat après reconstitution de ce simulacre et *anastylose* du jambage nord du passage.

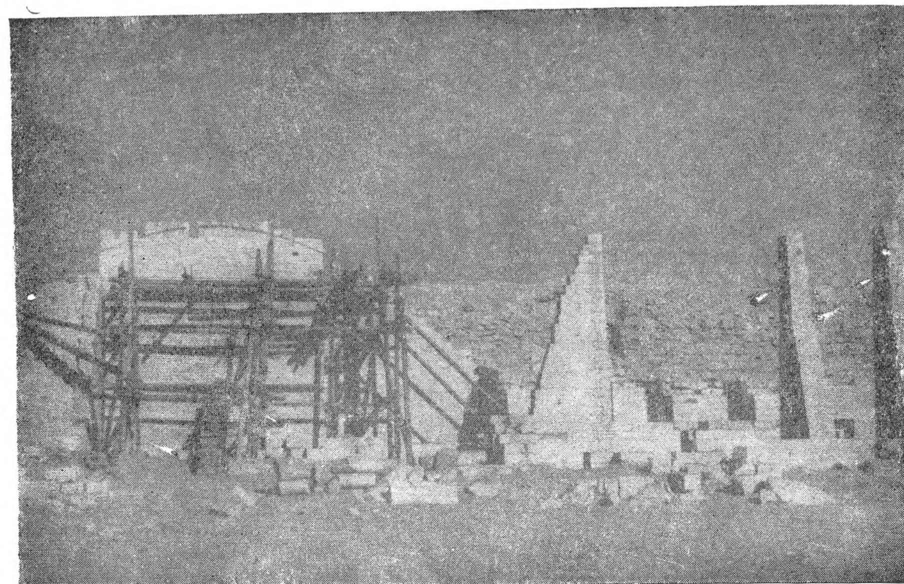
Pl. IV



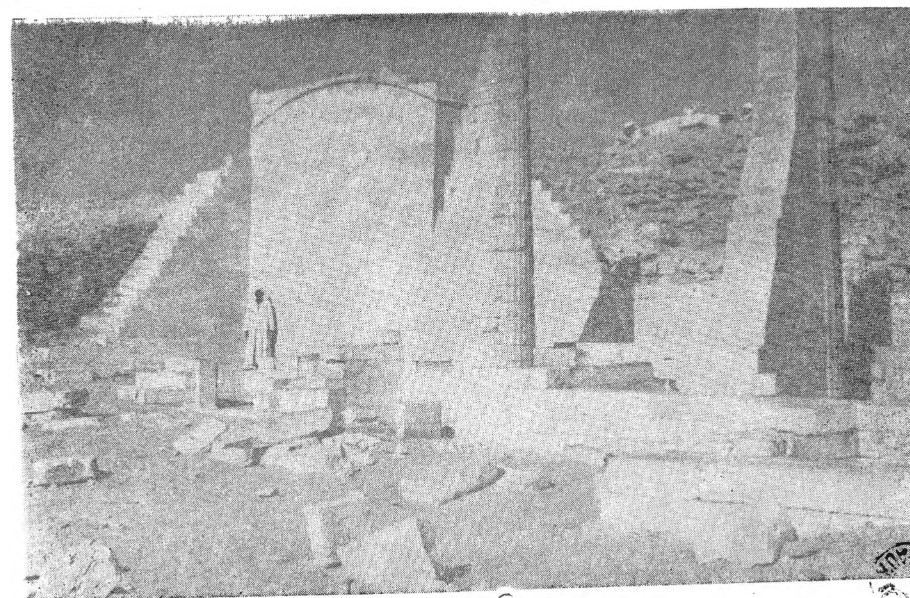
(*a*) Vestiges des soubassements et des murs des couloirs en chicane de deux chapelles à colonnes cannelées et à toiture arquée lors de leur découverte.



(*b*) Les mêmes chapelles après *anastylose* et reconstitution partielle (mars 1969).



(*a*)

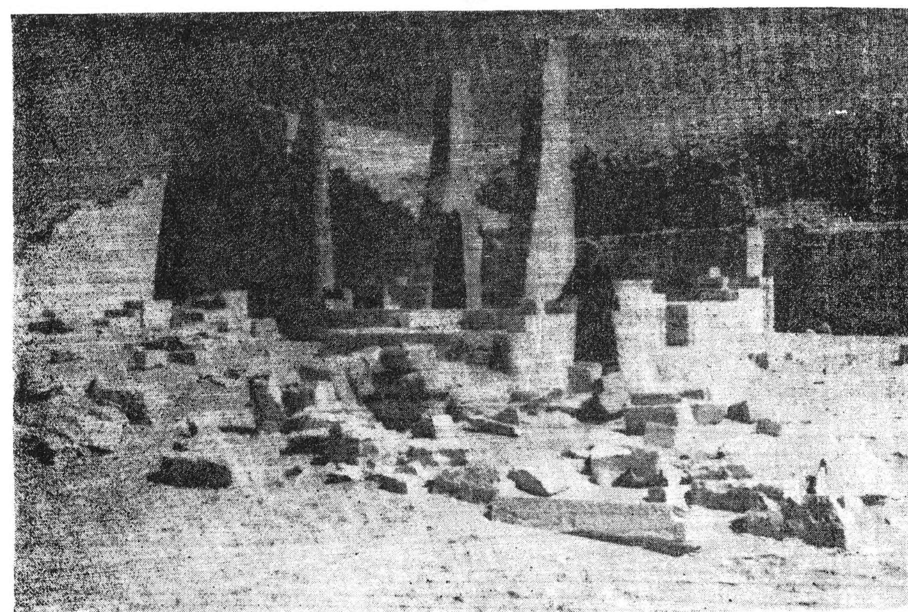


(*b*)

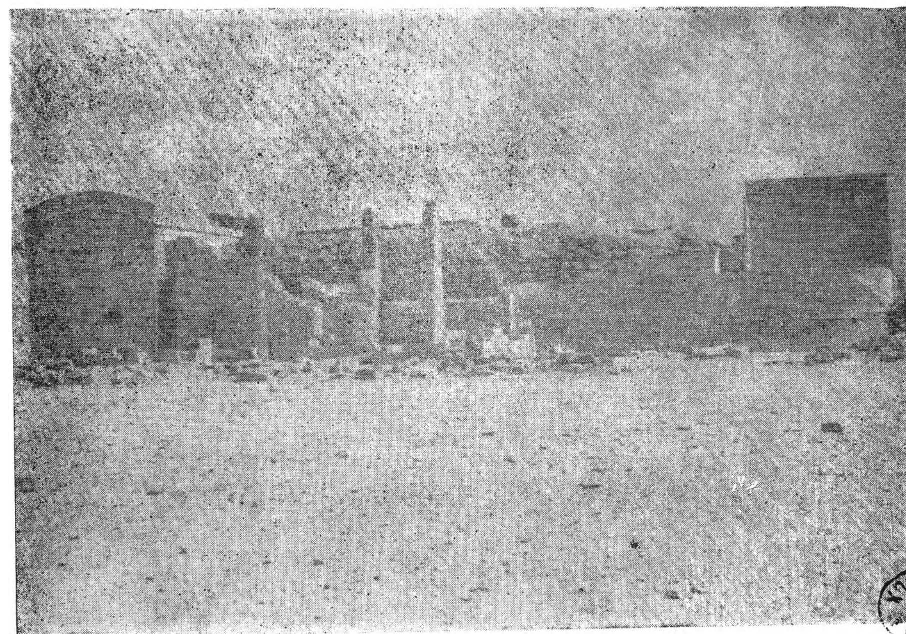
Reconstitution de la façade postérieure de l'une des chapelles à colonnes cannelées. Au premier plan, colonnes cannelées du temple "T".

(*a*) Pose des éléments anciens du tore arqué soulignant la crête de la façade.

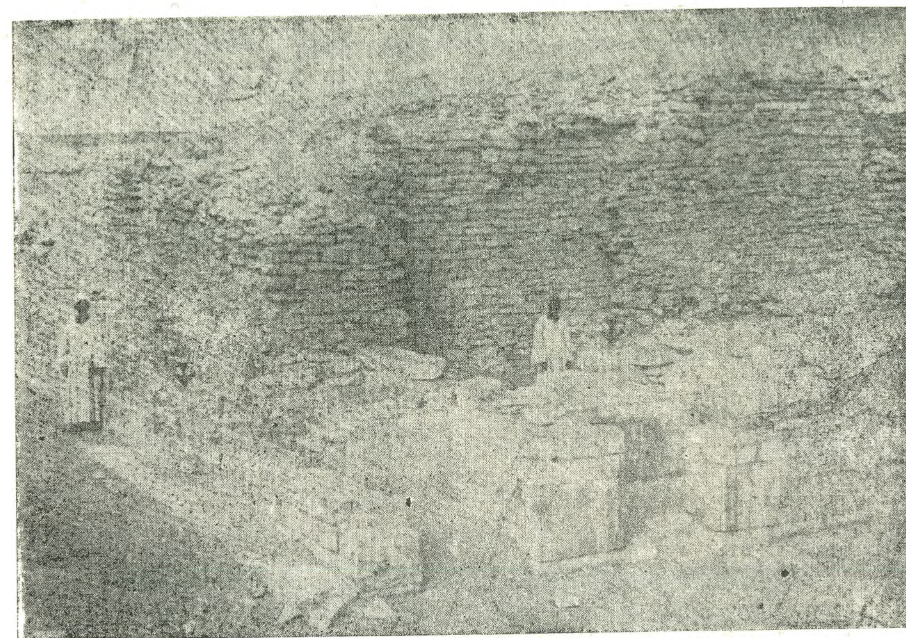
(*b*) A ce même tore les deux lacunes ont été comblées par des éléments neufs.



(*a*) Façade postérieure de la chapelle à colonnes cannelées après achèvement de sa crête arquée. En premier plan, colonnes du temple "T".



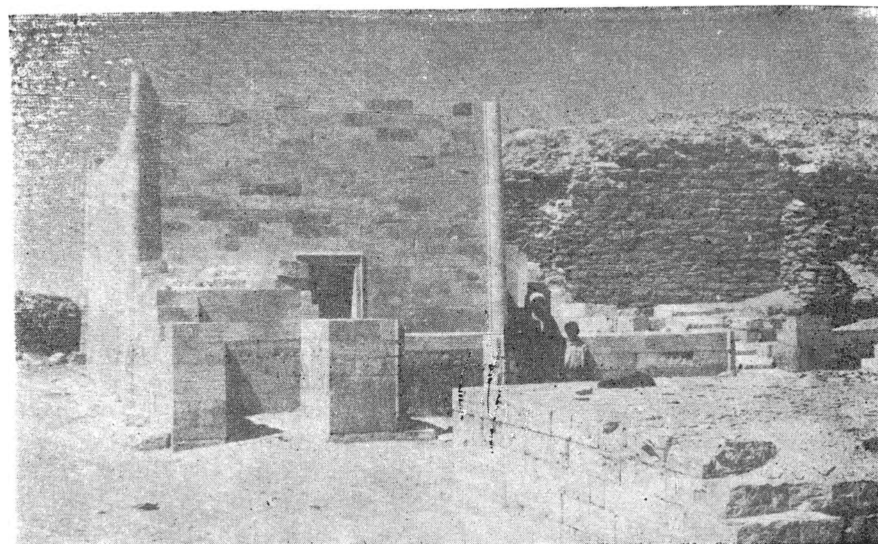
(*b*) Vue d'ensemble des façades postérieures vers l'Ouest. A droite, le pavillon à tores d'angles et le mur arrondi, après *anastylose* et reconstitution (mars 1969).



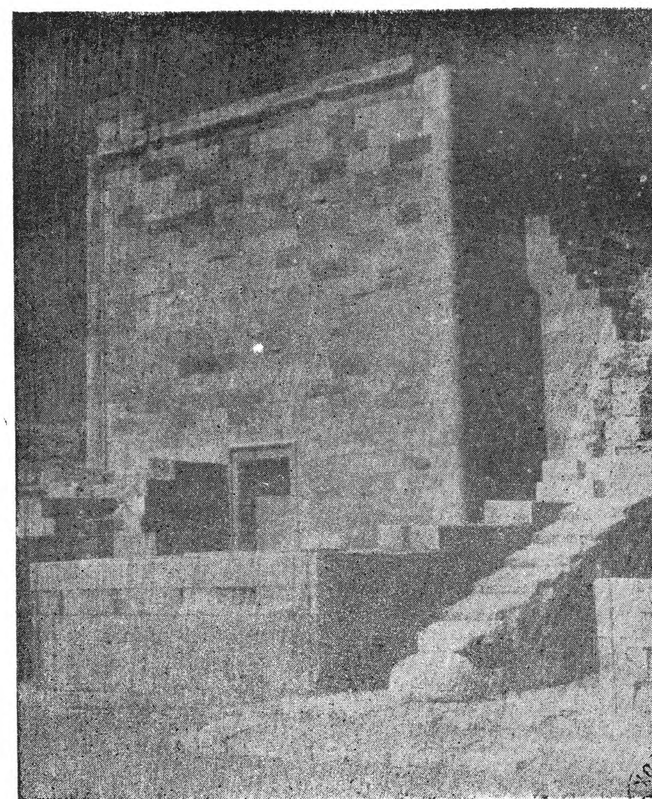
(*a*) Extrémité S.-O. de la cour du "Heb-Sed" montrant les vestiges d'un pavillon à tores d'angles (ceux-ci marqués de flèches).



(*b*) Le même pavillon à tores d'angles en cours de reconstitution (mars 1965).



(*a*)



(*b*)

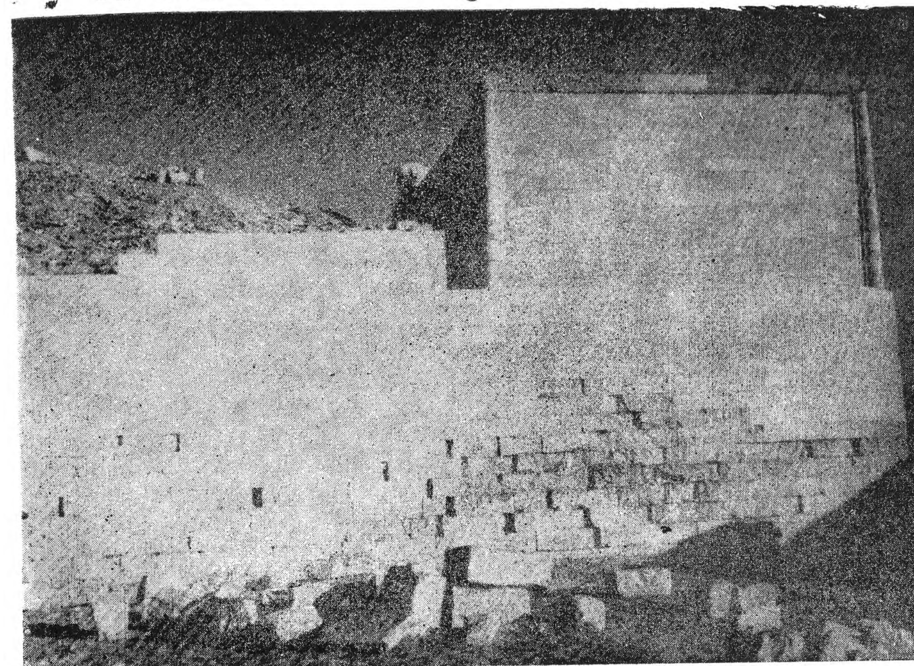
Reconstitution du pavillon à tores d'angles.
(*a*) Etat en fin mars 1966.—(*b*) Etat en mai 1967.



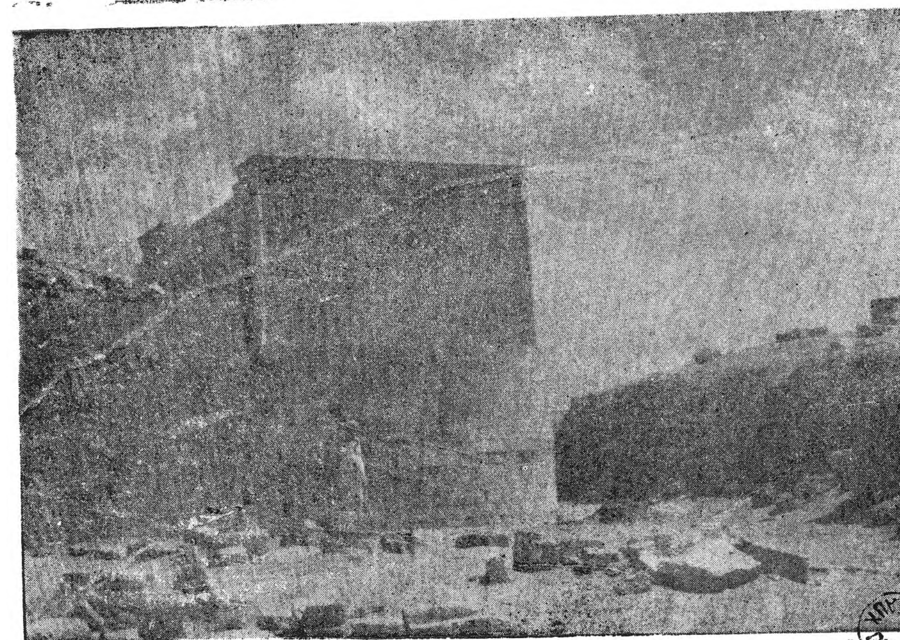
(*a*) A l'Ouest du pavillon à tores d'angles en cours de reconstitution, le mur arrondi avant réfection.



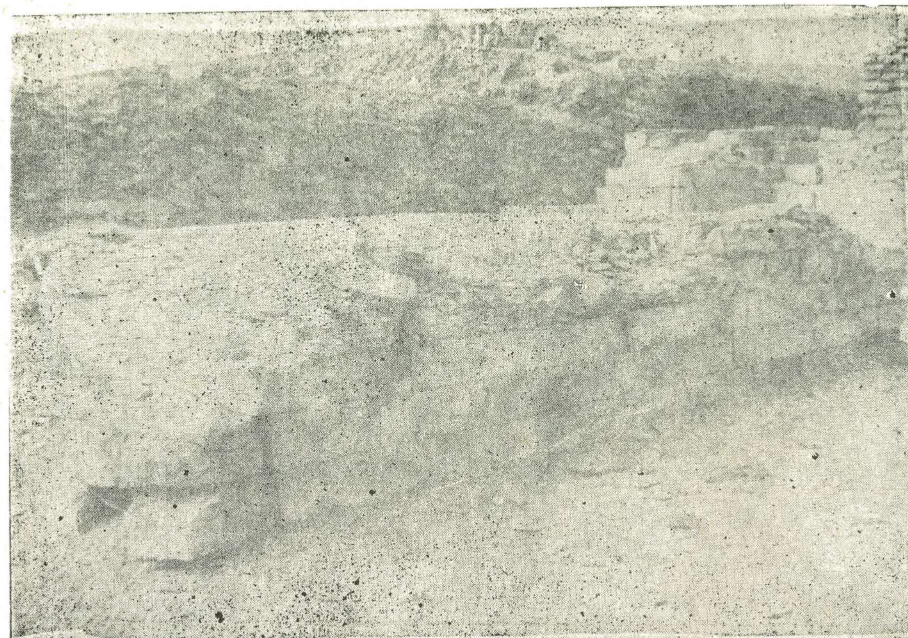
(*b*) Début de la reconstitution de la façade postérieure du pavillon à tores d'angles et du mur arrondi (mars 1965).



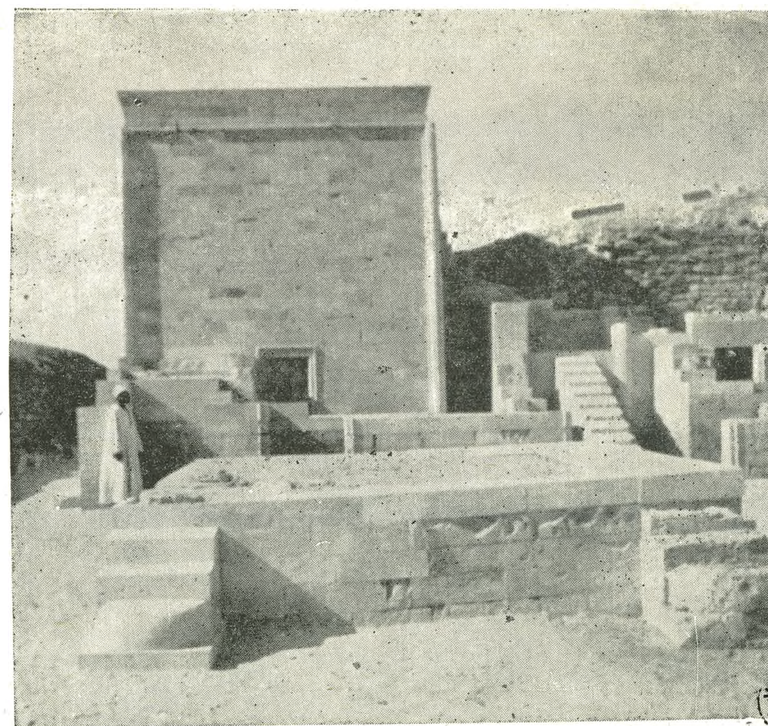
(*a*) Etat de la reconstitution de la façade postérieure du pavillon à tores d'angles en mars 1968.



(*b*) La même façade et le mur arrondi après achèvement de leur reconstitution (mars 1969).



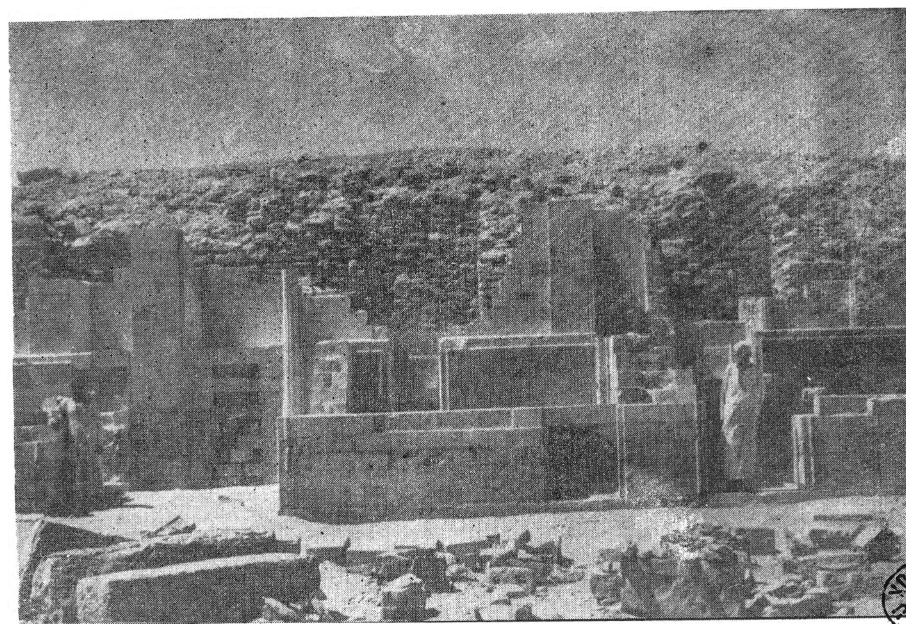
(*a*) L'angle N.-E., avec escalier, de l'estrade du *heb-Sed* : état avant restauration.



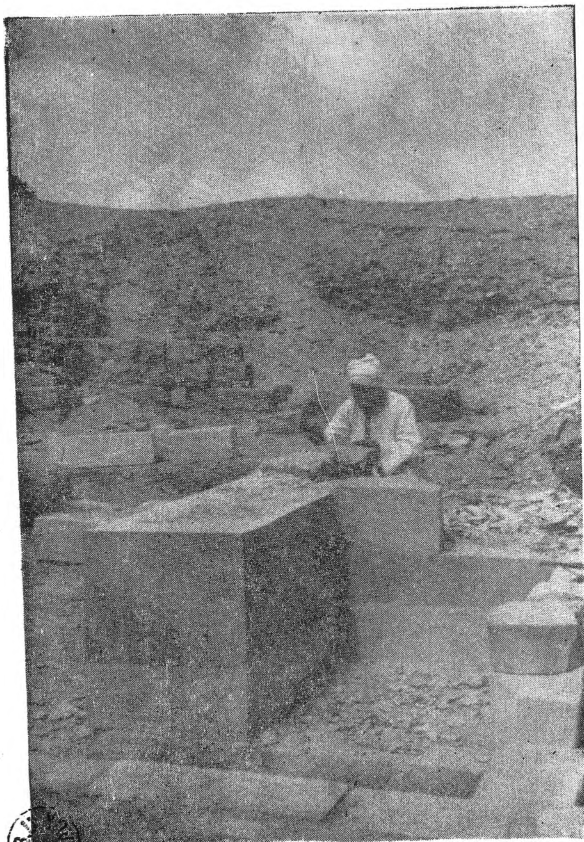
(*b*) La face orientale de la même estrade après restauration. En arrièreplan, la façade principale du pavillon à tores d'angles après achèvement de sa reconstitution.



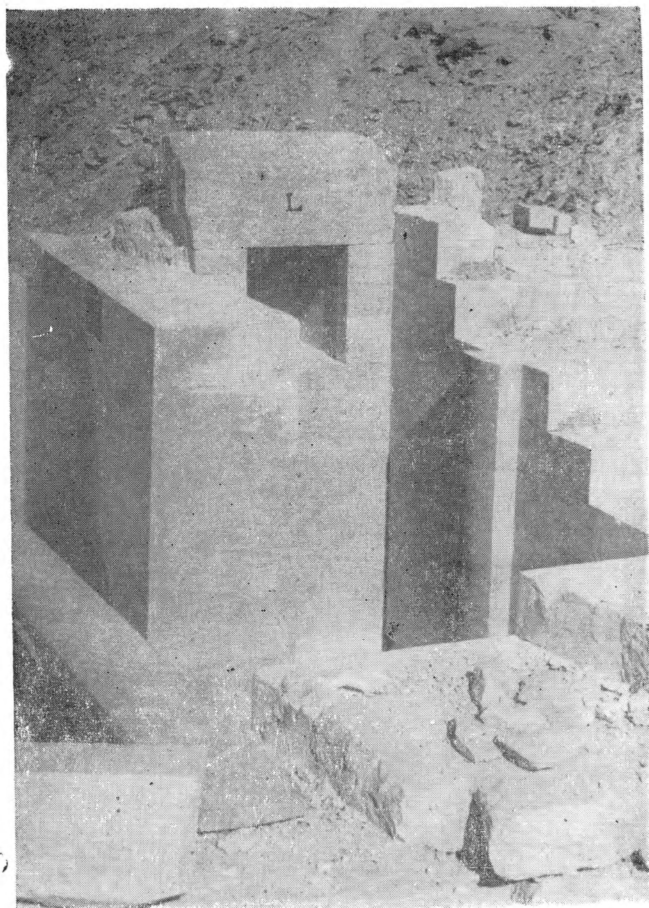
(*a*) Façade principale du pavillon à tores d'angles après achèvement de sa reconstitution (mars 1969).



(*b*) Reconstitution en cours de la seconde chapelle à toiture arquée et à escalier : état en fin mars 1970.



(*a*)

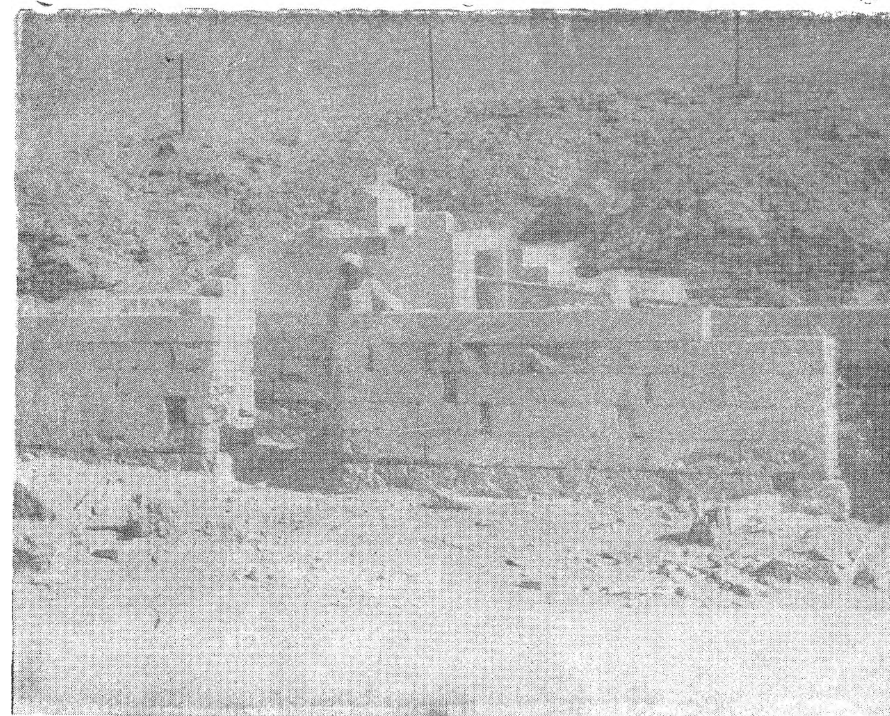


(*b*)

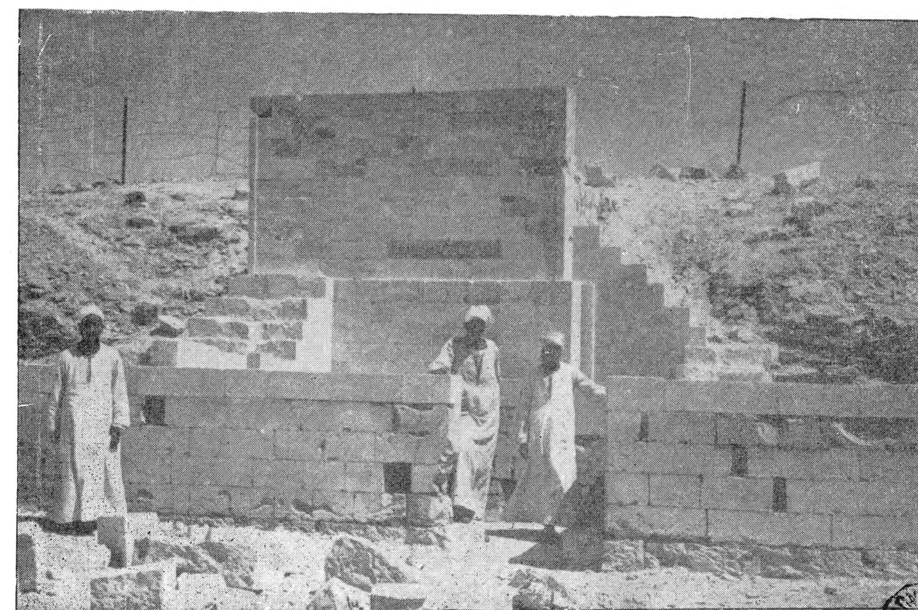
Réédification de l'une des chapelles de l'Est dans la cour du "Heb-Sed".

(*a*) Début de la reconstitution de sa chambre-sanctuaire avec simulacre de porte ouverte latérale.

(*b*) La même chambre-sanctuaire après la pose d'un linteau ancien L sur la niche à offrandes.



(*a*)



(*b*)

Reconstitution de la façade principale de l'une des chapelles de l'Est.
(*a*) Etat en fin mars 1969. (*b*) Etat en fin mars 1970.

COMPLEMENTARY STUDY TO ABU-SIMBEL TEMPLES RESEARCH PROJECT

BY

Prof. Dr. Ing. Mohamed Awad M. RASLAN

Assiut University 1970

None of ancient Egypt's temples .. numerous and varied as they are have ever attracted as much attention as the two Abu Simbel Temples in Nubia. No archeological remains have been so thoroughly appreciated, studied or become as famous after their resiting into their new location to protect them from being inundated following completion of the High Dam project.

Some of the world's finest savants and scientists of many a specialisation have studied these all-time monuments... and have acceded to them their fullest historical, archeological, architectural and artistic rights. Hardly any single aspect has been overlooked or ignored... but has transported us into ages past to relive the sage of this eternal civilization ... the ages of glory and prosperity to see for ourselves how the ancient Egyptian with his faith and ability was able so many a thousand year ago to bring about the artistic and architectural miracles created by mankind. Today's savant, architect and artist can observe, mirrored in time and history, a magnificent past rich in knowledge, science and art... making use of the experience of the ancients and establishing the civilization of our present and future on its foundations.

Then comes the present day miracle. With the scientific and applied potential so vastly available to mankind, the two temples have been resited in their new locations... to remain for this, and future generations a vived testimony to the knowledge and science of our forefathers thousands of years ago.

In this paper I would like to contribute my own little drop to the flood of research work that has already been done... and which might compliment those studies. This paper covers the following:

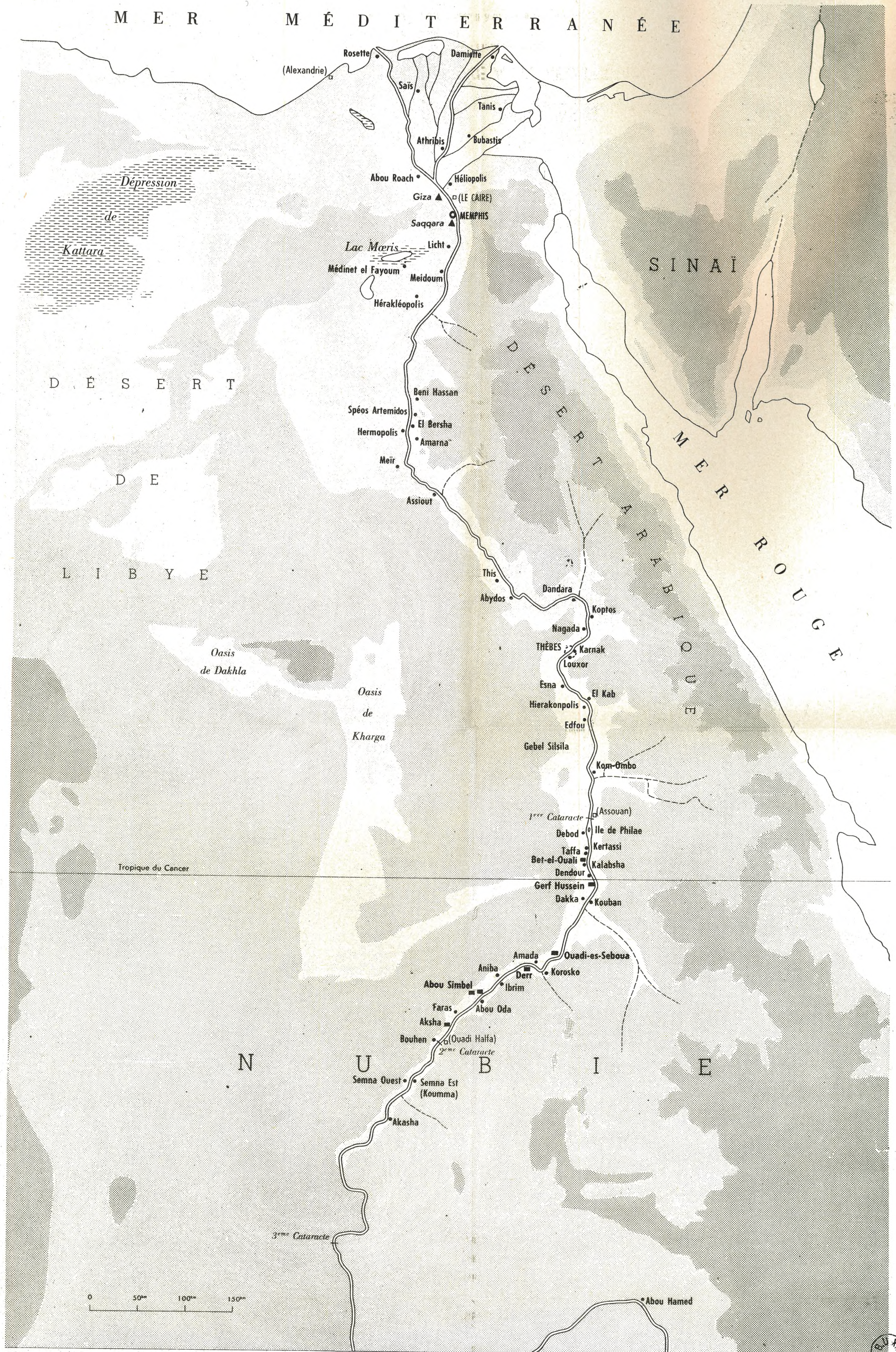
(I) *Selection of site... and the architectural, constructional format of the temple*:

From the very earliest of ages the ancient Egyptians were aware of the importance of the location of lower Nubia (the region lying between the first Cataract south of Aswan, and the second Cataract south of Wadi Halfa) in relation to securing Egypt's southern borders. That is why they considered it one of their spheres of acute interest. Fig. 1.

By its location and difficult natural structure (or formation), the second Cataract provided natural frontiers dividing Southern Egypt from Northern Sudan (Upper Nubia). The navigational hazards in the river were a safe barrier between north and south. Moreover lower Nubia was a connecting point for Central African countries and ancient Egypt. Aswan was a trading centre between south and north.

Throughout their long history the Egyptians tried by all means (military.. political or trading.. as the respective case may be) to maintain their influence. However during certain periods of weakness or decline... coupled with the vast distances between Nubia and the North and the inability to rehabilitate and control it effectively (thus lagging begind Egypt's leaps forward in civilization... brought about by Egypt's very nature and close connections with other civilizations) made Nubia the subject of designs by various invasions by immigrant tribes from the east, west and south. These tribes invaded and occupied Nubia during several periods.

From the start of XVIII th Dynastey (about 1500 BC) lower and upper Nubia joined Egypt. This was confirmed by Thotmoses III who made it part of his great Empire. Lower Nubia in particular was an indivisible part of Egypt... influenced by Egypt's culture and worshiping its gods. The kings of ancient Egypt wanted to make this a real fact and therefore set up the vast number of temples which we find scattered along both banks of the Nile between Aswan and Wadi-Halfa, to confirm Egypt's sovereignty over that territory.



LE NIL DE LA 3ᵉ CATARACTE A LA MÉDITERRANÉE

■ Les six temples de Raᶜmsès II en Basse-Nubie (ancien pays de Ouaouat).

■ Le temple dédié par Raᶜmsès II à la Reine Nofretari.

Fig. 1

Ramses II was the major contributor of these temples which work he crowned with his masterpieces, the two magnificent Abu Simbel Temples... choosing their particular location as the site upon which to proclaim that anyone (enemy) who went beyond that point would incur the wrath of the god of the Temple (Hor-Akhti : god of the rising sun)· The selection of this particular site involved several considerations :

(*a*) The location lies at the natural dividing point between lower and upper Nubia. By selecting this spot the king wanted to set the two temples as a surveyor's metal sign (a landmark) which defines a given territory. There could be no room for argument ... the two temples stood as Egypt's southern forntiers.

(*b*) The topography of the location stresses another important fact ... the facades of the two temples which look out from the rock of the plateau are not on an even plane, each in on a different plane from the other. The two planes if extended would meet at one point and constitute (nearly) an almost perfect right angle. On the other hand we do note that the deliberately chosen facade of the Great Temple (that of Ramses II) faces the northern course of the Nile, and anyone sailing upstream. The facade of the small temple (that of Queen Nefertari) faces the Southern course of the Nile and anyone sailng downstream, Fig. 2, 3.

This was so designed to affirm to anyone sailing upstream, and seeing the facade of the great temple from the north that this was the point at which Egypt's southern borders ended. Anyone sailing downstream from the south would see the facade of the small temple in the distance and there by realise that he had come to the point where Egypt's southern borders began.

(*c*) Choice of this particular constructional (structural) technique and burrowing into (cut into) the rock was a confirmation of the ancient Egyptian persuasion that land remains for all time. The Temple was therfore related to the rock and the land to remain as eternal as that land.

We know this to be a fact because the ancient Egyptian (carved) cut into his tomb (burial chamber and annexed chambers) into the heart of the earth so that it would be preserved as long as the land itself survived on the assumption that anything built above the surface (such as the tomb's superstructures) however strong can be wiped out by many varying conditions. There are for example the many pyramids that have been eroded out of existence by time.

(2) *Balance of the facades of the two temples* :

There is a very obvious balance in the overall structure of facades of the two temples. They are both very closely related to each other. This can be noted if an observer stands at sufficient distance away so that his angle of vision can take in the facades of both temples at the same time.

If we were to suppose that there is an imaginary base line $A^1 - A^2$ linking the two temples, and that there is another imaginary line $B^1 - B^2$ stretching medially and horizontally into the hollows of the natural rock through the facade of the cliff side (the rocky plateau) which comprises the facades of the two temples, the two lines would meet at one particular imaginary point (C). Fig. 4, 5.

Should we suppose that the semetrical axis of the Great Temple extends to meet the base line at a given point (D), while the semetrical axis of the Small Temple extends to meet the base line at a given point (E), thereupon we find that point (C) lies approximately one quarter of the distance between points (D) and (E) in relation to the Great Temple.

Consequently the base line distance can be subdivided according to the following formula :

$$DC = \frac{1}{3} CE$$

Therefore, the area of the Great Temple's facade being

$= 38 \times 28 = 1064$ m^2 approximately,

and the area of the Small Temple's facade

$= 28 \times 12.7 = 355$ m^2 approximately.

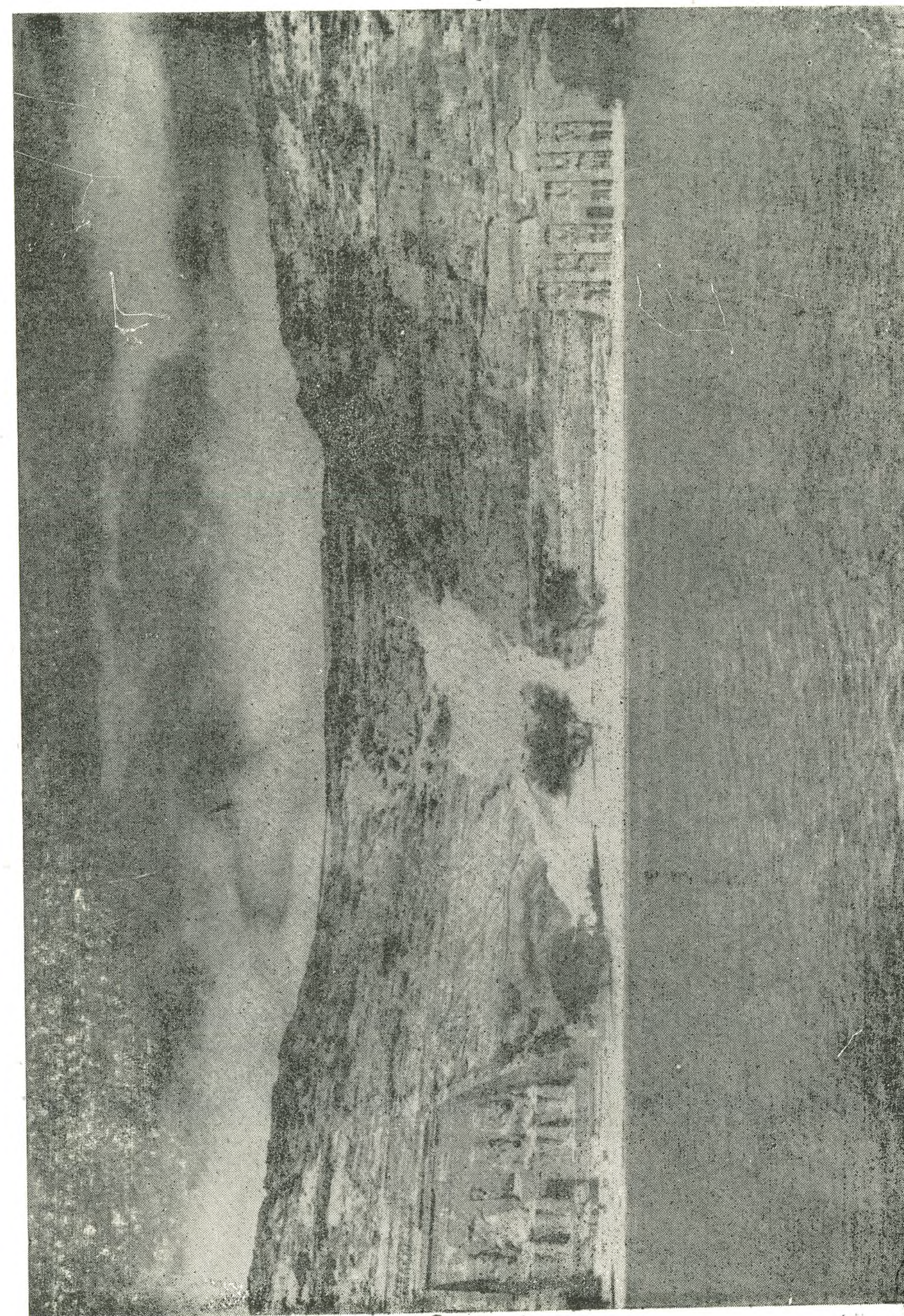


Fig. 2.—Panorama of the Abu Simbel Temples.

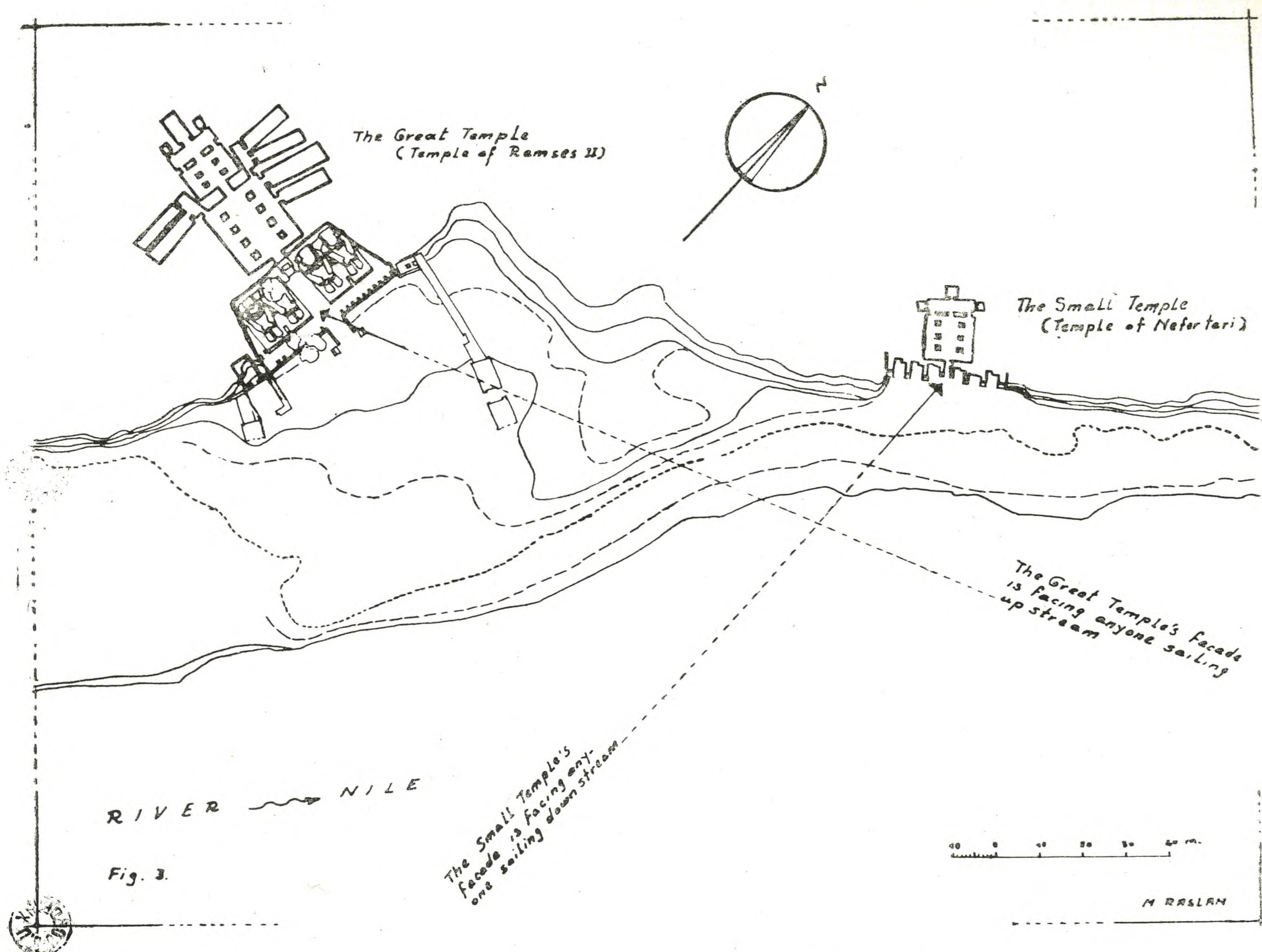


Fig. 3.
Relation between the facades of two Temples and their orientation to anyone sailing upstream or downstream.

Then we can easily imagine that point (C) .. (constituting a focal point) provides the perfect composite balance between the area of the Great Temple's facade and its distance from point (C) on the one hand, and the area of the Small Temple's facade in relation to the same focal point (C) on the other. Fig. 6.

i.e. The area of the facade of the Small Temple × 3 = The area of the facade of the Great Temple × 1

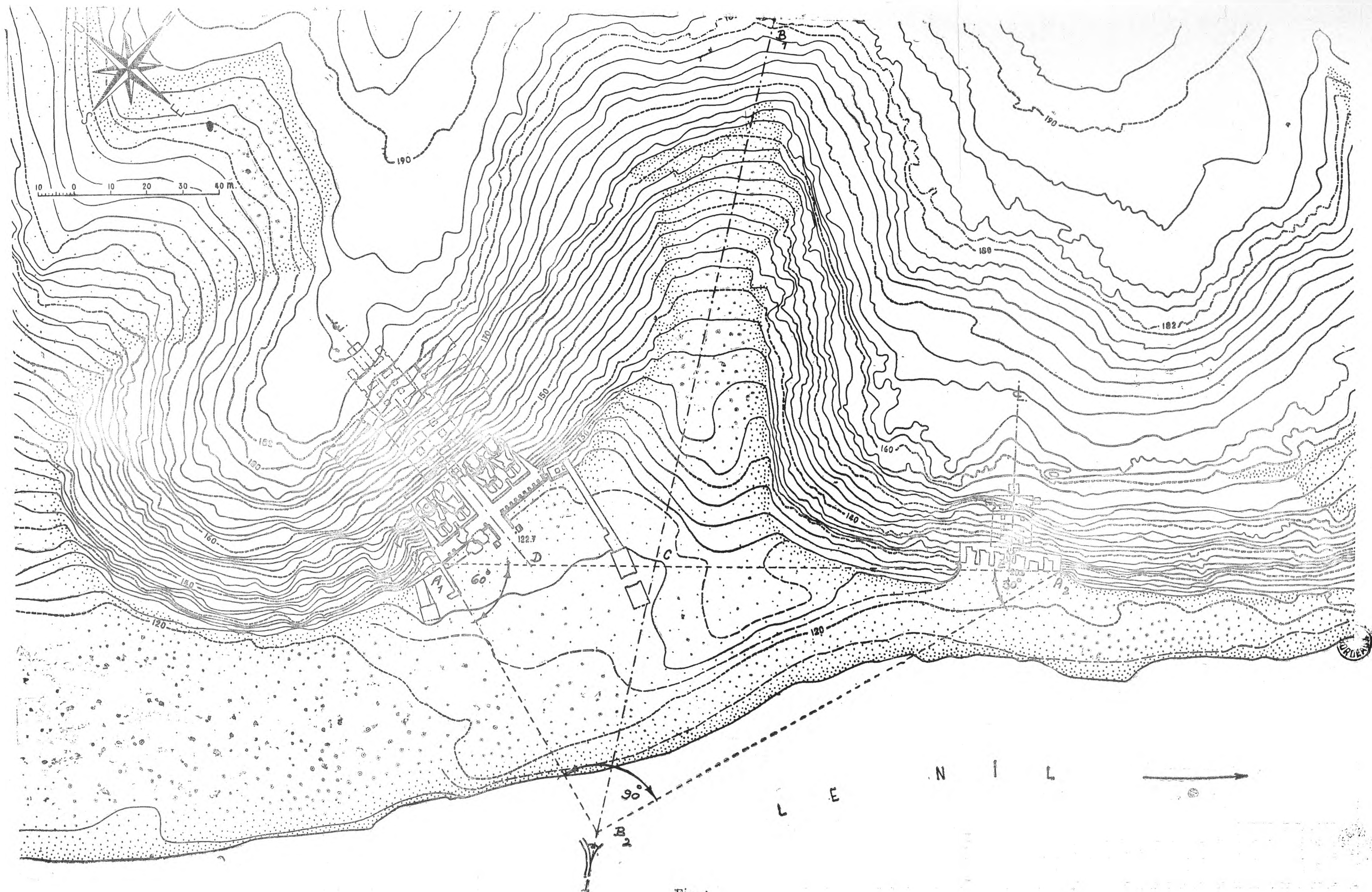
$$355 \times 3 = 1064 \times 1$$

$$1065\ m^2 \approx 1064\ m^2$$

CONCLUSIONS

From all this it is obvious that the selection by the ancient Egyptian architect of the location of the two temples in relation to each other was not haphazard but was the outcome of a profound insight and deep comprehension. He balanced the position of each temple in the rock bulk and its natural conditions, and related the two to the surface of the waters of the mighty Nile in a delightful logical composition and harmony that clearly demonstrates his deep understanding and realization of the principles of architectural and artistic theory.

Dr. Ing. M. Awad M. RASLAN.



10 0 10 20 30 40 m.
190
190
180
182
170
160
150
130
140
120
160
150
120
122.7
B
C
D
60°
30°
90°
L E N I L

Fig. 4

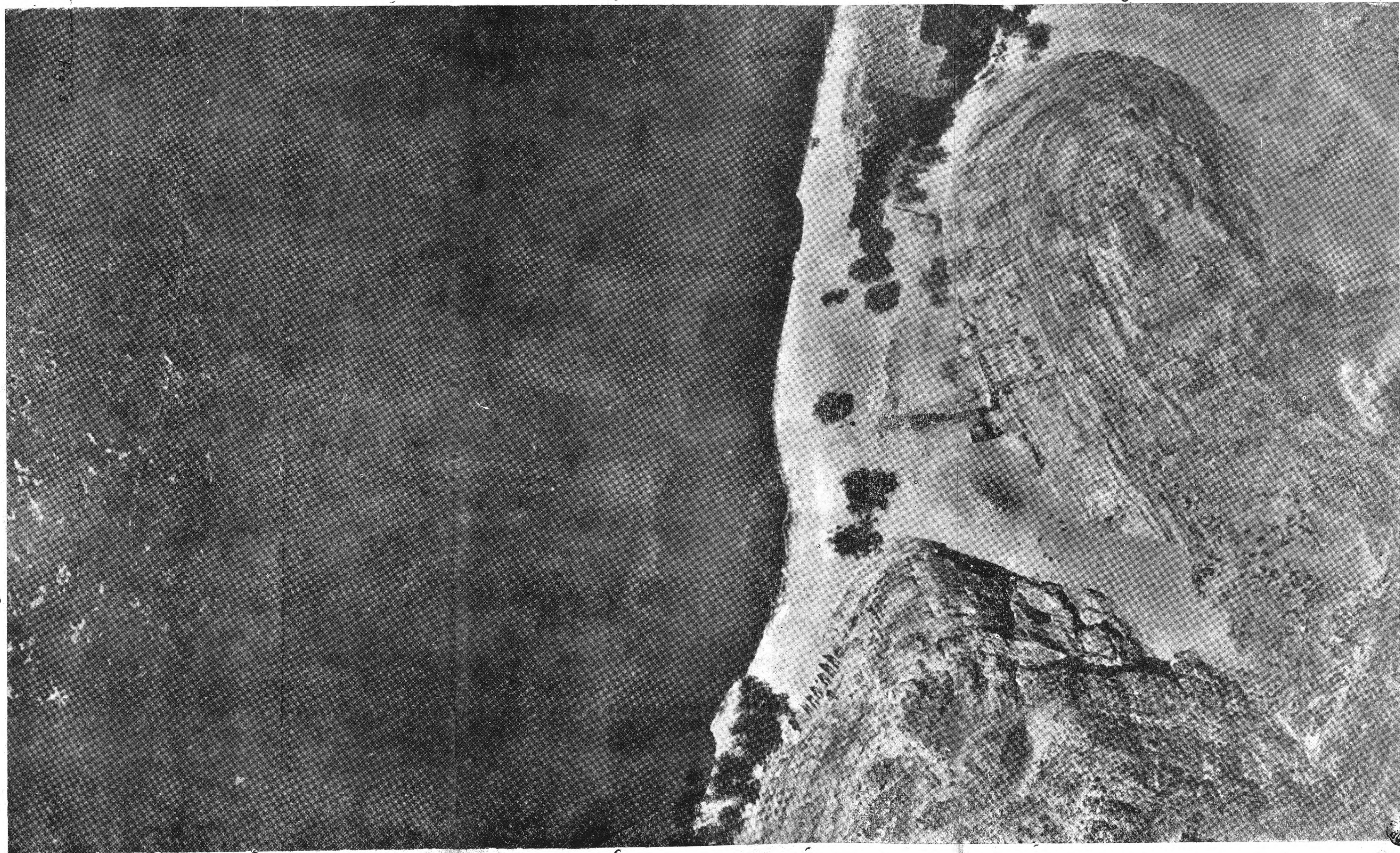


Fig. 5

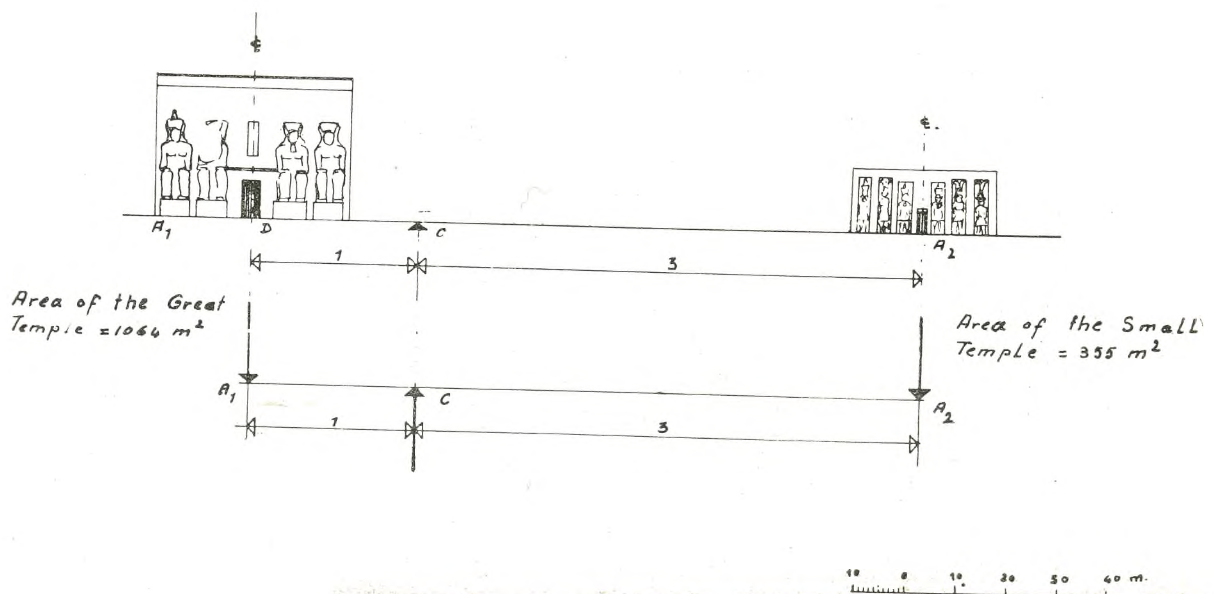


Fig. 6

Balance of the facades of the two temples.

ACADEMIC AND APPLIED PAPER ON THE HISTORY OF ARCHITECTURE

The Causeway of Ounas Pyramid

BY

Prof. Dr. Ing. Mohamed Awad M. RASLAN

Assiut University 1970

INTRODUCTION

It is now an established fact that the constructional groups (inclosure) of the royal tombs of the Old Kingdom assumed their ideal form as from the IVth Dynasty ... following a comprehensive and overall development of their constructional components be it in their layout, structural or architectural forms and came to be represented in what has been described as the Pyramidal Group composed of :

— The pyramid, which rises above the tomb (and as a mammoth tomb-stone).

— Funerary Temple ... which lies to the east of the pyramid itself.

— The Valley Temple, in the valley, between the edge of the plateau and the course of the River Nile.

— The Causeway ... which links both temples.

From the beginning of the Old Kingdom (the First and Second Dynasties) the latter three components whether it be from the point of view of layout, structure or architectural were extremely simple in style and formation ... when the tomb was no more than a pit carved into the rock of the plateau leading to the burial chamber topped by a mud-brick stucture or "Mastaba".

— The niche – (false - door) carved into the east wall of the tomb (and before which sacrifices were offered and prayers and blessings performed on numerous occasions) served the purposes of the funerary temple.

— In the valley was set up a marquee ... either of textiles or reed stalks which was enough to serve the purposes of the Valley Temple was built for.

— It might have been sufficient to pave a way between the marquee in the valley ... and the tomb atop the plateau ... to serve as the funerary causeway.

All these components were obviously to develope into a structural form parallel with the development of the "mastaba", until it eventually assumed pyramidal form.

The Ounas pyramid Group (End of Vth Dynasty, or about 2423 BC) was from a historical, layout, constructional and architectural point of view the ideal example of the full crystallisation of the idea of a pyramid group. It is distinguished from other constructional groups by :

(1) The illustrations that cover all the wall surfaces of the burial chamber (under the pyramid) ... and which are known as the pyramid texts, the symbols of which have been transcribed and translated to become what has now been termed "The Book of the Dead".

(2) The Causeway (Subject of our paper) and its unique constructional and engineering style ... the remarkable method of its illumination ... the carvings which record on the walls portraits of life ... with all the activity involved in the reign of king Ounas (Whereas in most previous pyramid Groups, the inner walls were left bare). Moreover, the many remnants of the group's component elements have given it very special importance from the point of view of study and research work.

(3) The Valley Temple ... and the discovery of many elements of its components which have explained the purpose and duties of that type of temple. It has also been possible to reconstitute the elements that were discovered during excavations which enabled us to get a very accurate idea of what the timple was like. If we are able to discover the remaining components we will then be able to get a very carefully defined picture of the layout. Fig. 1, Fig. 10. a-f

Furthermore, completion of the components of this pyramid group (The Valley Temple – The Causeway – Funerary Temple – Pyramid) constituting as they do the first encounter we have with this archeological site, would give even greater impostance to this study.

The Causeway

Subject of this research work and study are the following points :

(1) *Location and layout* :

It has been established by all the research work that has been conducted so far, that the Egyptian architect was very realistic and practical in his ideas. This has been accurately reflected in his architectural style ... in the way he has been able to overcome the various problems of planning and structure that came his way. In his choice of the location of the Causeway in the depression between the two rocky plateaus (northern and southern) ... without having to go to the trouble of carving a path out of the limestone rock if he had wanted to follow a straight line-letting it instead run simply and easily between the mountains, our Egyptian architect was thinking on realistic architectural lines. Fig. 2.

This crystallises the philosophy of the Egyptian architect when he tries to solve structural and constructional problems. He follows sound engineering (architectural) theory and principles ... but simplifies them and adapts (or bends) them to his needs within the limits of his material or practical resources.

Furthermore and in confirmation of this statement ... the ancient Egyptian architect ... was from the very earliest of days convinced that nature was the source of all beauty and structural harmony. Any restriction, (destruction) or change of that structure would destroy its aesthetic value. That is why in all constructional work ... he tackled his architectural or engineering problems in harmony with nature itself ... not as a destroyer. He tried to add to its aesthetic beauty and complete its infrastructure, allowing his buildings to harmonize and blend with nature's lines.

Even when he was forced to conform to certain religious restrictions in making the tomb secure and impenetrable ... he burrowed deep into the rock without leaving any trace above the surface of the ground which might disfigure or affect the nature of the location. On the contrary he used the majesty and glory of nature as a tribute to the tombs of the dead. This is very obvious in the choice of the location for the tombs of the kings of the New Kingdom (the Valley of the Kings) in Thebes necropolis.

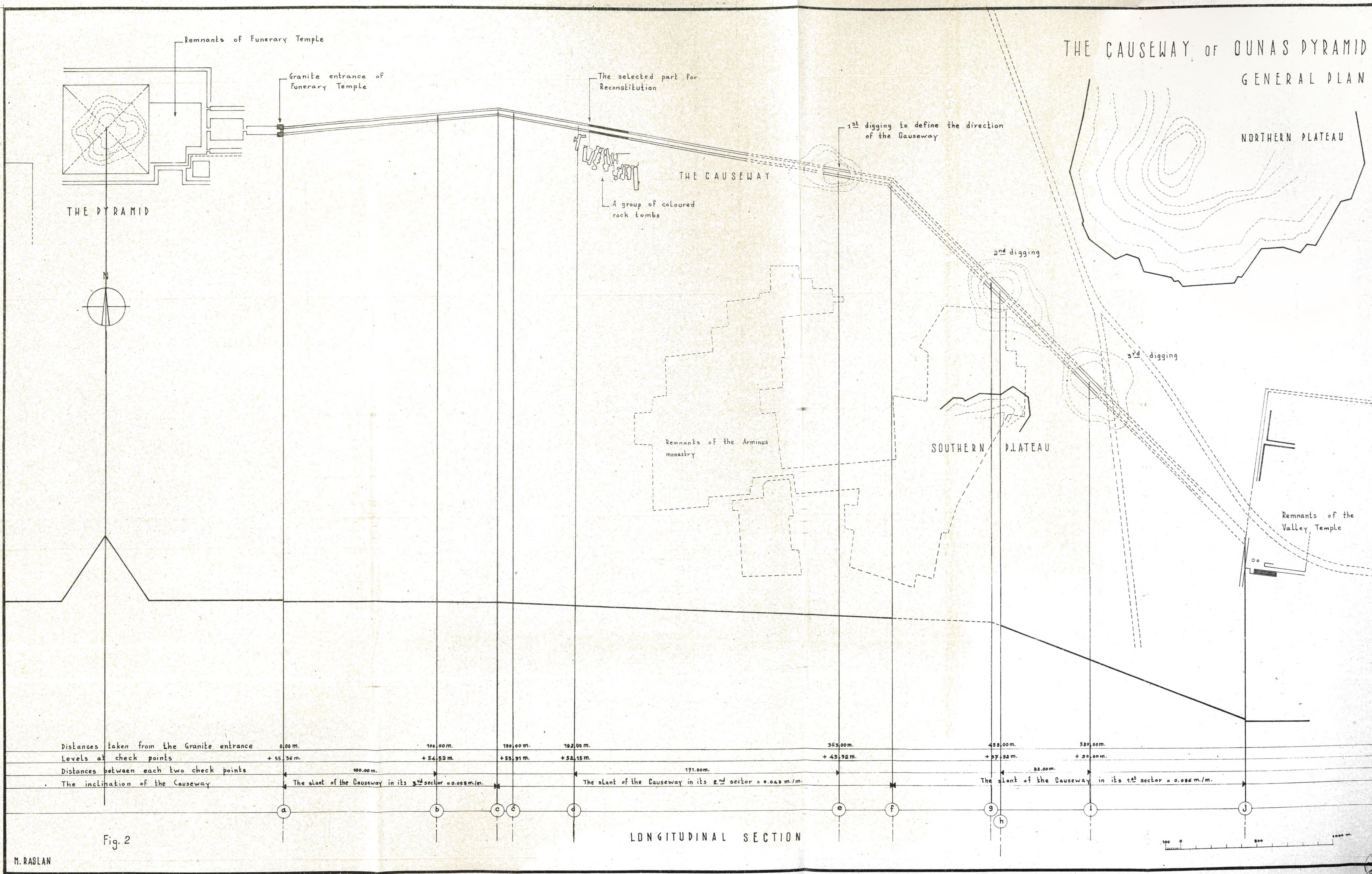
Various factors led to and helped pave the way for a study of the Causeway ... as a prelude to the consideration of the other component elements of the Pyramid Group. These include:

(*a*) The discovery of many parts of the side-walls of the Causeway, in good condition and in their original locations ... to a height of three courses (which is about half the height of theCauseway, or 1.57meters). It appears that the surfaces of the outer walls were left without any carvings. As for the inner walls, the first and second lower courses were also left uncarved, but the walls of the upper four courses were covered in carvings and illustrations to the roof. The texts explain and interpret the meaning and significance of the carvings all of which are of a very high aesthetic standard They give us a very complete picture of what life was like in the reign of King Ounas, be it from the point of view of the nature of the region ... or from the agricultural ... industrial ... social ... religious and even military angles. Fig. 3*a*, 3*b*.

(*b*) Discovery in the traces of the digs when charting the course and outlines of the Causeway of many remains of the various courses of the Causeway, in their original brilliant colours. Also discovered were many of the slabs used to cover the ceiling of the Causeway. One of the slabs was discovered whole and in perfect condition, but broken in two. On the lower surface can be seen the traces of how it was affixed to the sixth course (the topmost course) and a definition of the line where it connected both inside and outside with the surfaces

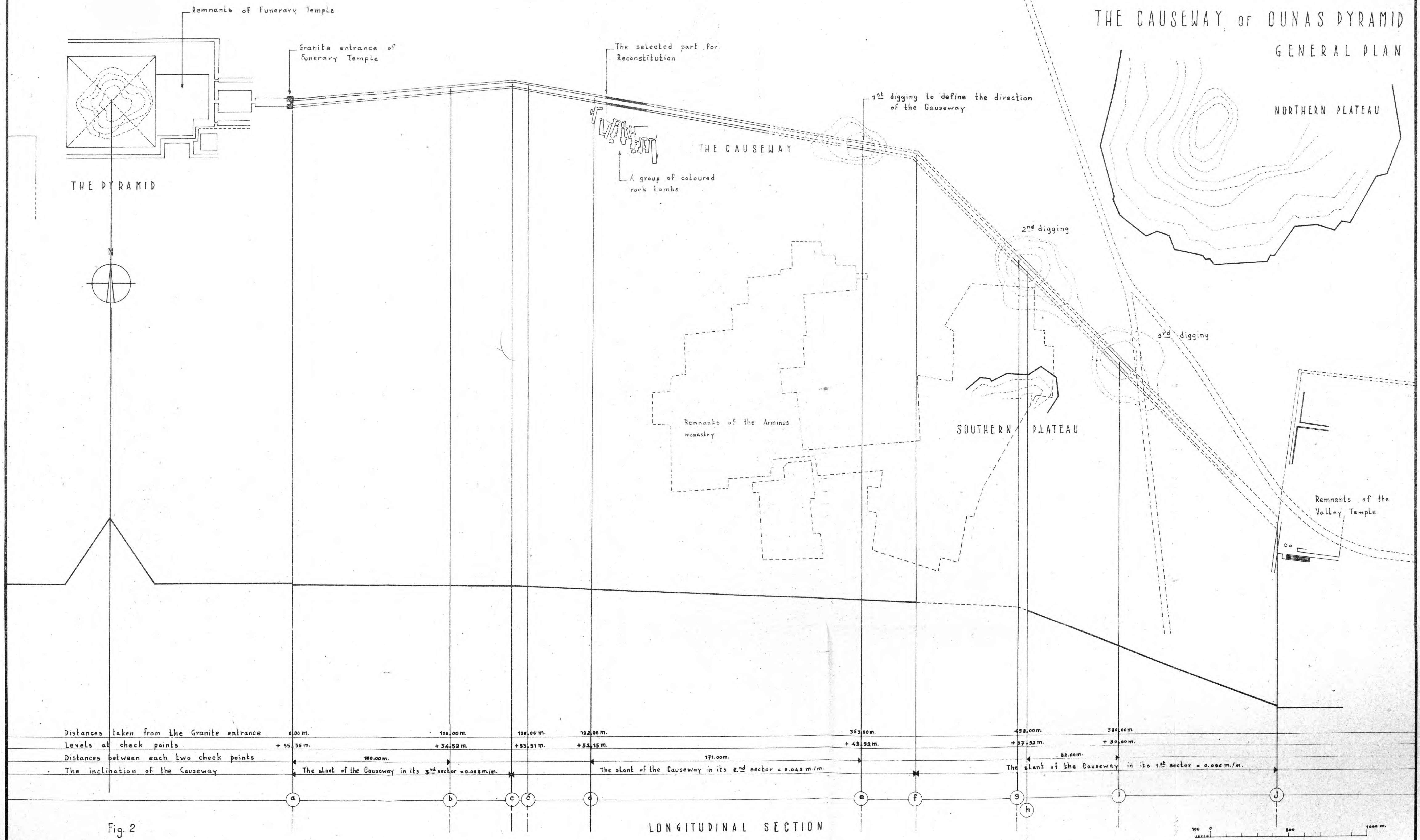


Fig. 1.—The northern part of the Valley Temple as originally found.



THE CAUSEWAY OF OUNAS PYRAMID
GENERAL PLAN
Remnants of Funerary Temple
Granite entrance of Funerary Temple
The selected part for Reconstitution
1st digging to define the direction of the Causeway
NORTHERN PLATEAU
THE PYRAMID
THE CAUSEWAY
A group of coloured rock tombs
N
2nd digging
3rd digging
Remnants of the Arminus monastry
SOUTHERN PLATEAU
Remnants of the Valley Temple
Distances taken from the Granite entrance
Levels at check points
Distances between each two check points
The inclination of the Causeway
0.00 m.
100.00 m.
130.00 m.
192.00 m.
363.00 m.
438.00 m.
580.00 m.
+ 55.36 m.
+ 54.52 m.
+ 53.91 m.
+ 52.15 m.
+ 43.92 m.
+ 37.92 m.
+ 30.00 m.
100.00 m.
171.00 m.
82.00 m.
The slant of the Causeway in its 3rd sector = 0.008 m./m.
The slant of the Causeway in its 2nd sector = 0.043 m./m.
The slant of the Causeway in its 1st sector = 0.096 m./m.
a
b
c
ć
d
e
f
g
h
i
j
LONGITUDINAL SECTION
M. RASLAN

Fig. 2


THE CAUSEWAY of OUNAS PYRAMID
GENERAL PLAN
Remnants of Funerary Temple
Granite entrance of Funerary Temple
The selected part for Reconstitution
1st digging to define the direction of the Causeway
THE PYRAMID
THE CAUSEWAY
A group of coloured rock tombs
N
NORTHERN PLATEAU
2nd digging
3rd digging
Remnants of the Arminus monastry
SOUTHERN PLATEAU
Remnants of the Valley Temple
Distances taken from the Granite entrance
Levels at check points
Distances between each two check points
The inclination of the Causeway
0.00 m.
+ 55.36 m.
100.00 m.
+ 54.52 m.
150.00 m.
+ 53.91 m.
192.00 m.
+ 52.15 m.
363.00 m.
+ 43.92 m.
438.00 m.
+ 37.92 m.
580.00 m.
+ 30.00 m.
100.00 m.
171.00 m.
82.00 m.
The slant of the Causeway in its 3rd sector = 0.008 m./m.
The slant of the Causeway in its 2nd sector = 0.043 m./m.
The slant of the Causeway in its 1st sector = 0.096 m./m.
a
b
c
ć
d
e
f
g
h
i
j
LONGITUDINAL SECTION
100 0 500 1000 m.
M. RASLAN
Fig. 2

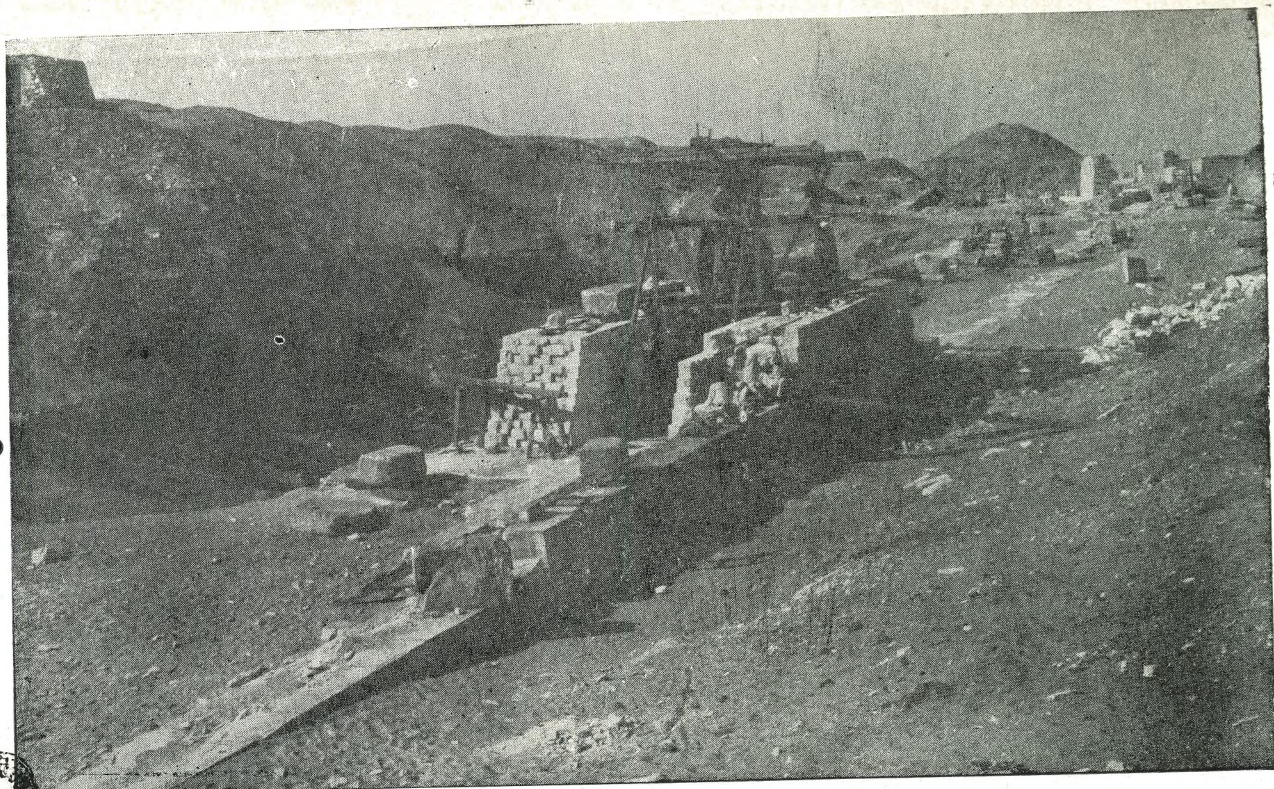




Fig. 3 (*a*).—The reconstituted part of the Causeway : The side-walls are in good condition and in their original locations ... to a height of three courses (1.57 m.). Reconstitution operation in its early stage.

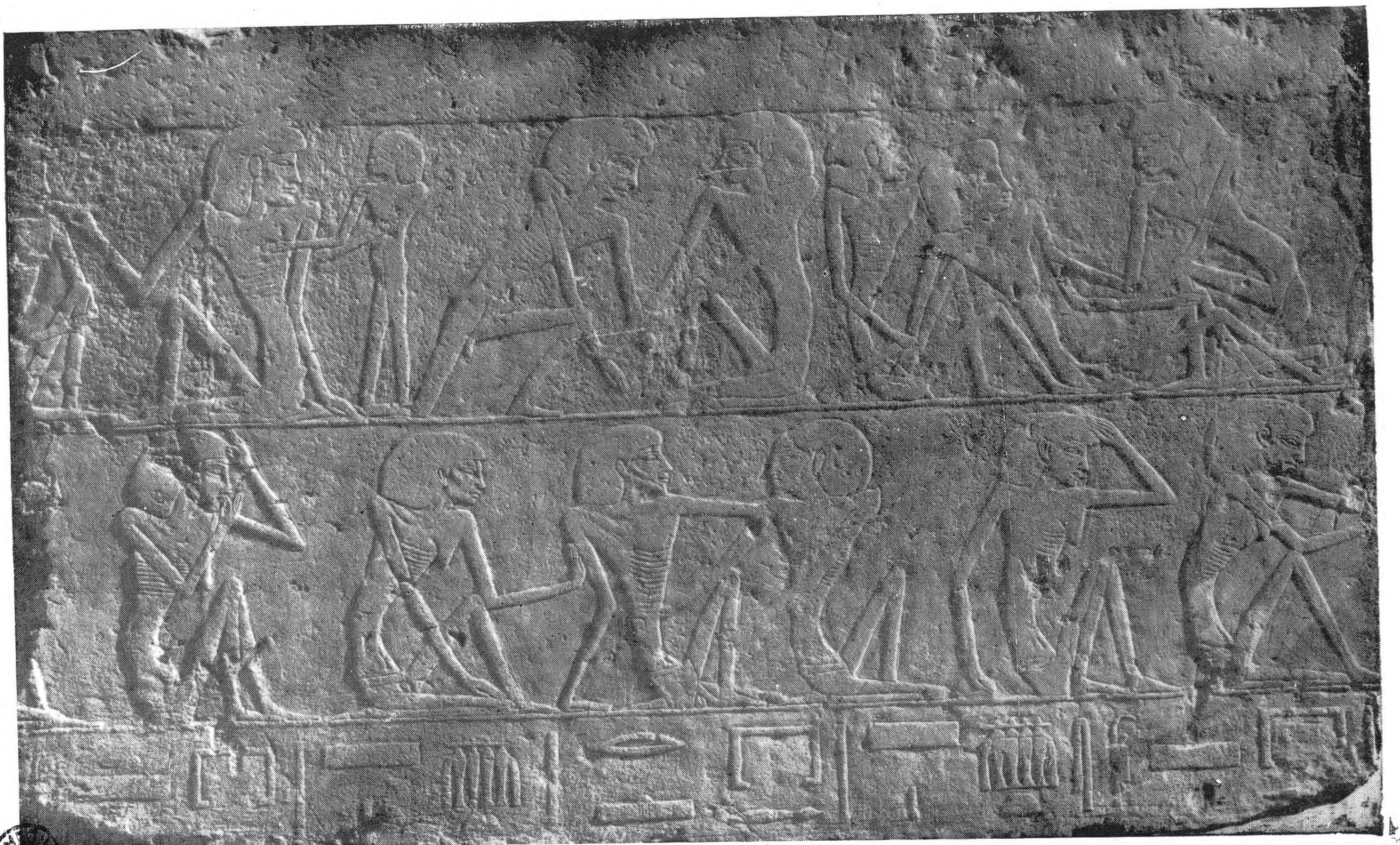


Fig. 3 (*b*).—A stone block found among the course of the Causeway : Highly expressive carvings and inscriptions showing a famine which took place during the region of King Ounas.

of the walls of the Causeway. These elements were extremely useful in defining the height of the Causeway, since the distance between the outer and inner defining lines in the thickness of the wall at the upper surface of the course (Immediately below the roof slab.) Fig. 4 *a-c*.

(*c*) Discovery of most of the flooring of the Causeway, and defining the course it ran as well as its linking point with the temple of the valley and the constant hope that the rest of the Causeway will be discovered at the connecting point. Fig. 5.

(*d*) The revealing during the research work and study undertaken of many a structural, architectural and applied element in the technique and method of Causeway building, and how the engineering and human problems were overcome. These in themselves are considered unique.

(2) *Architectural and constructional outlines of the Causeway*
(a) *Technique* :

The constructional techniques common to the ancient Egyptian style of engineering were used.... that is to say the use of bearing walls. The walls were constructed of blocks of stone (stretcher and bonder) to ensure a strong interlocking of the building. The stones were laid all alorg the width of the wall, with only a very few interstices left which were filled with chipped stone and mortar. The dimensions of the stones differ. They range in length from 0.80 the 2.00 meters their beds reaching about half the thickness of the wall (0.90 to 1.00 meteı). The height of each is between 0.50 and 0.53 meters. The longer stones were later used as sarcophogi for latent burials after being hollowed out for the purpose. Fig. 6 *a*.

The roof is of limestone slabs Fig. 6c the lower surfaces of which were illustrated and coloured to represent the sky. The background is painted blue and the stars in yellow. The slabs were affixed to the upper course, as can be seen from Fig. 7

by means of small cuttings and mortices in the lower surfaces of the slabs so that they fit into complementary positions in the upper surface of the course, which helped interlock the whole structure preventing any shifting or movement either of the stones forming the upper course or the slabs of the roofing either along the length of the Causeway or at any perpendicular direction across its length.

The Causeway having been built on an incline, in accordance with the lines along which it was planned and its location, the walls were constructed and the roof-slabs laid run parallel with its slant. The architect here presupposed that any shifting or movement or collapse in any part of the Causeway (due to the possibility of the foundations sinking, or even the collapse of the rock beneath, or perhaps even as a result of earth (tremors) would shift the roof slabs down the incline along the slope of the Causeway, particularly in these places where the incline was more pronouncedly sharp. He therefore took very special care over this matter. He made sure that the protruberances in the stones of the upper course and the mortices in the slabs did not follow one straight line so that the slabs would not telescope into each other. He even allowed for a gradual shifting in the position of each lock and mortice, so that even should one slab slip a little for any reason, there would still be a margin in the next slab's lock and mortice which would cushion the next slab and protect it. Fig. 6 *b*.

Furthermore, the roof-slabs were irregular in shape ; that is to say the result of resistance of the weight of each slab would follow a course which is not parallel to the direction of the Causeway. Fig. 6 *b,c*

The walls of the Causeway were erected on a flooring of flat limestone slabs in a varie-formed smooth surface, some 35 centimeters thick. This way, the slabs were laid in an interlocking manner to prevent shifting, in exactly the same manner as the architect designed the roof. This is further remarkable evidence of how much detailed structural knowledge the ancient Egyptian architect had. Fig. 6 *a*.



Fig. 4 (*a*).—The newly discovered part of the Causeway extending from the reconstituted part.

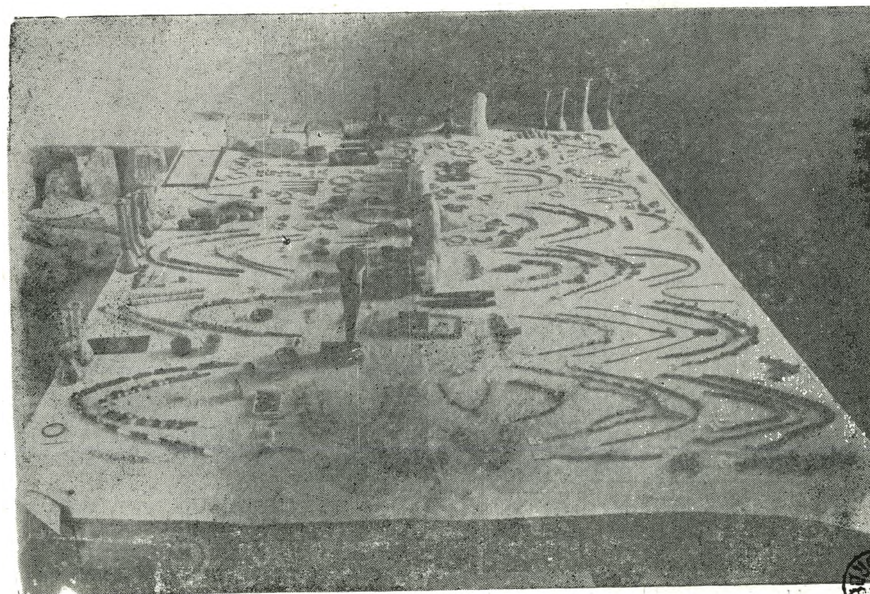


Fig. 4 (*b*).—Various findings discovered in the excavation of the part extending from the Causeway.

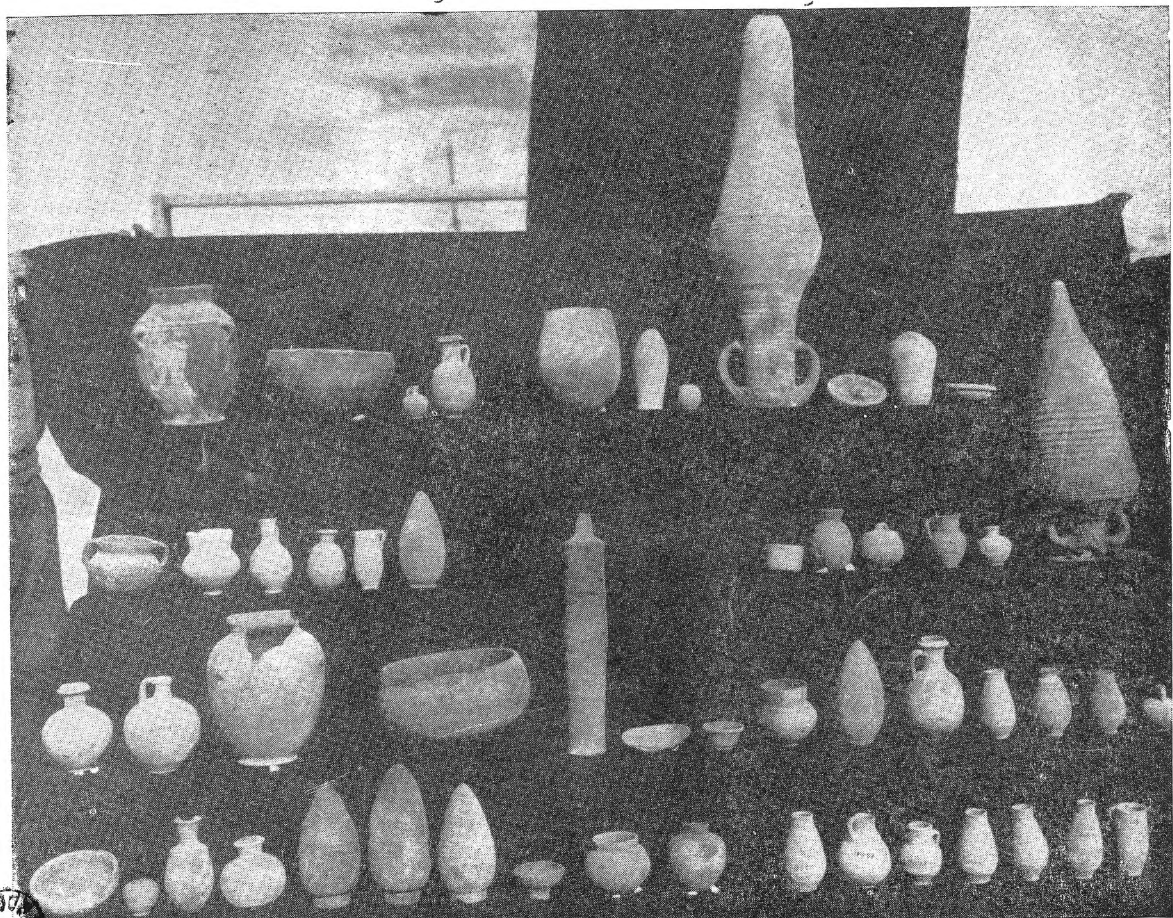


Fig. 4 (*c*).—A collection of clay potteries and containers found in the excavation of the part extending from the Causeway.

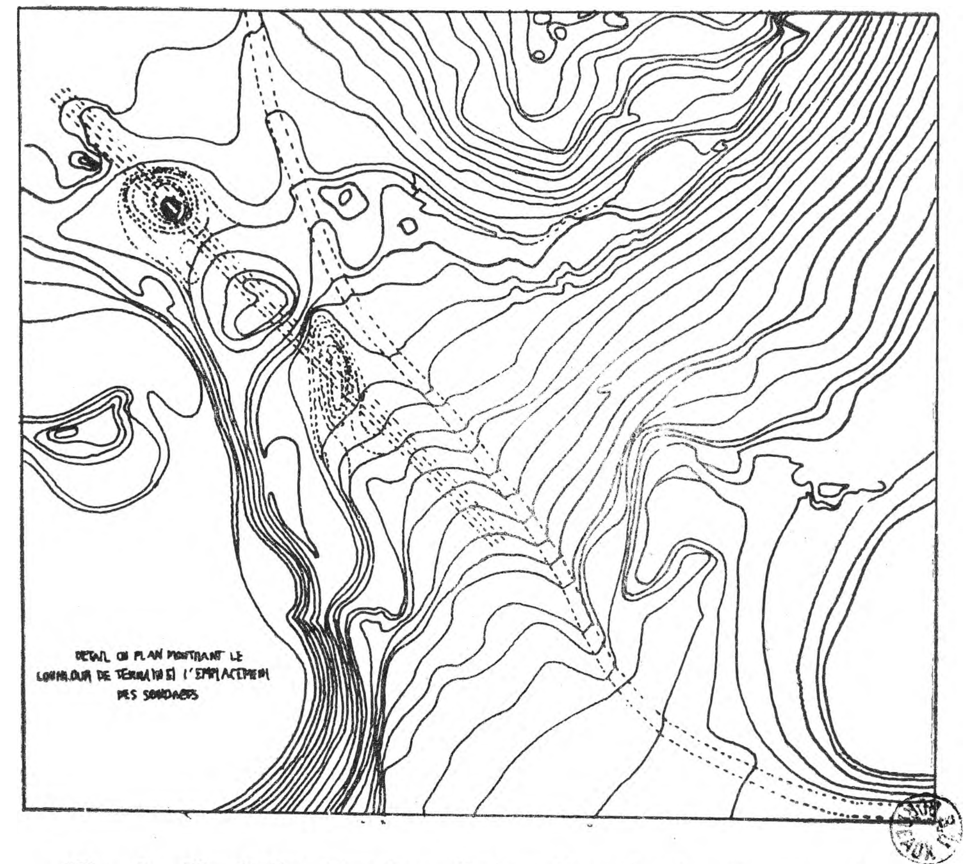
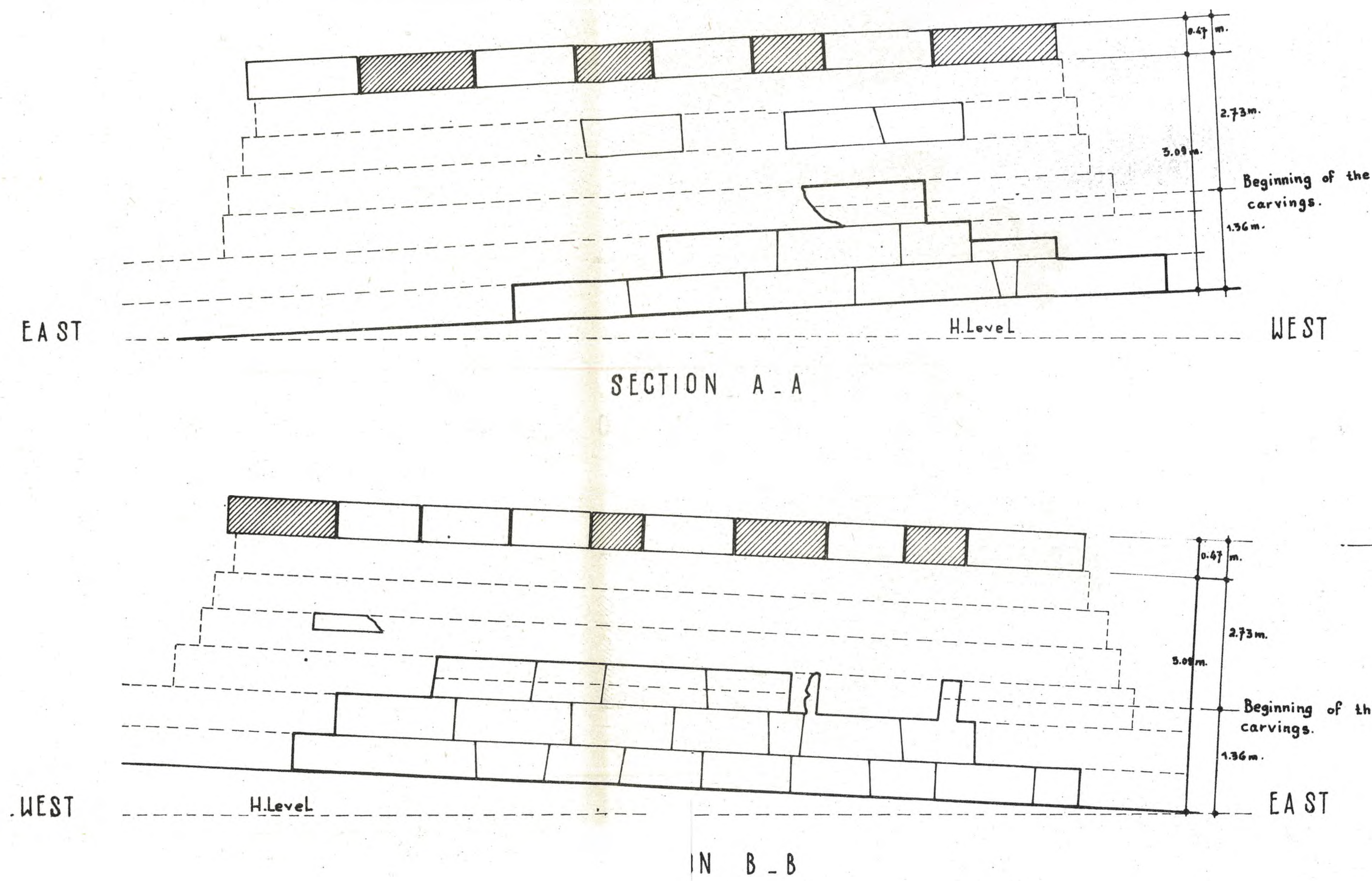


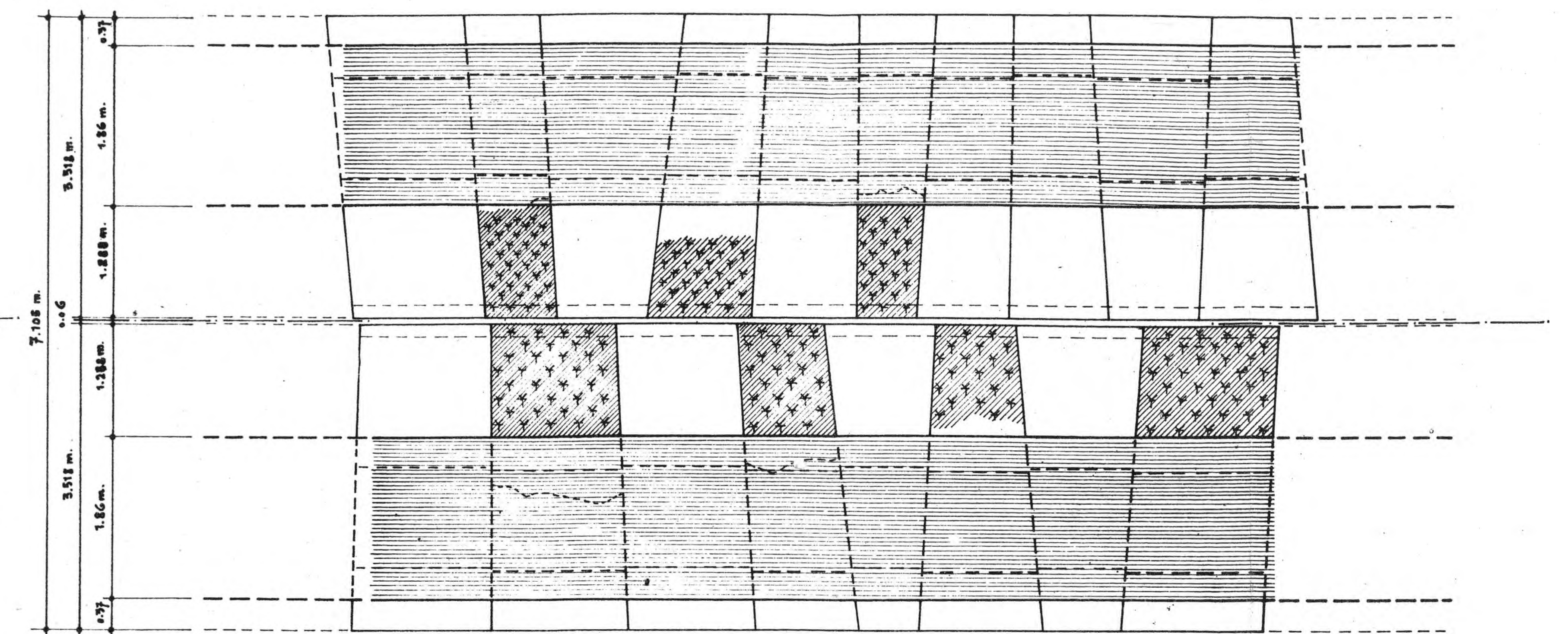
Fig. 5.—The Valley Temple : Contour lines showing the connection between the Causeway and the Valley Temple.

THE CAUSEWAY of OUNAS PYRAMID

THE RECONSTITUTED PART of THE CAUSEWAY



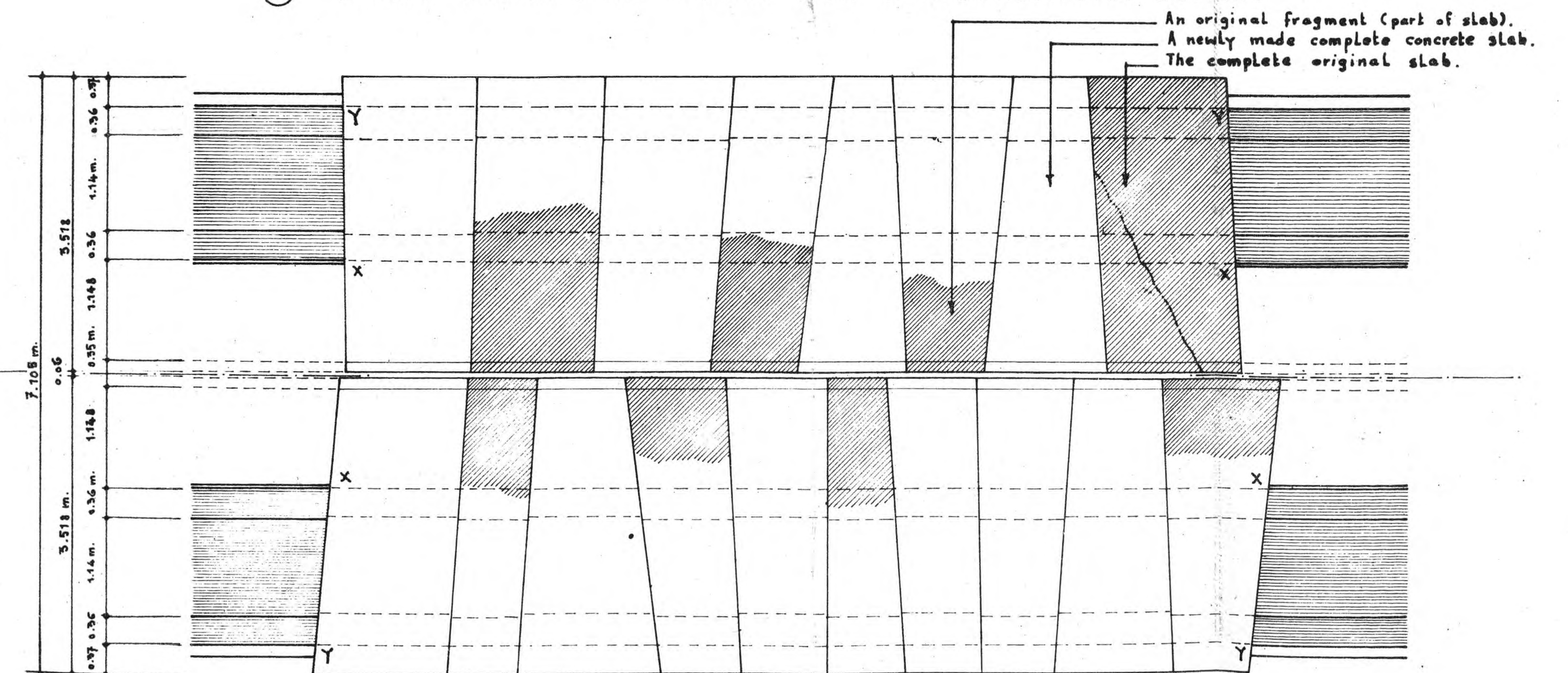
...N B_B



Ⓒ A PLAN SHOWING AN UPWARD VIEW of RECONSTITUTED ROOFING

A
B
2.06 m.
2.60 m.
2.84 m.
10°
N
A
B

ⓐ A PLAN SHOWING THE ORIGINAL WALLS AND FLOORING



ⓑ A PLAN SHOWING THE ORIGINAL AND THE NEWLY RECONSTITUTED ROOFING SEEN FROM ABOVE

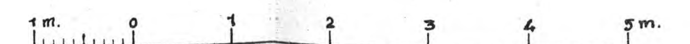
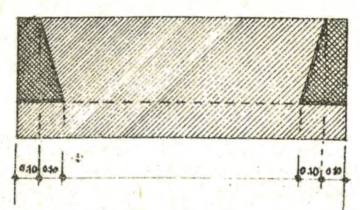


Fig. 6

M.RASLAN

THE CAUSEWAY OF OUNAS PYRAMID

THE RECONSTITUTED PART OF THE CAUSEWAY



SECTION B_B

- A newly reconstituted hollow concrete slab which supports the original fragment of the slab and was filled with light concrete.
- The original fragment of a part of a slab.
- Silicates which was used to isolate the original fragment from the newly concrete slab.

The sun rays falling through the illumination opening.

The illumination opening along the whole length of the causeway.

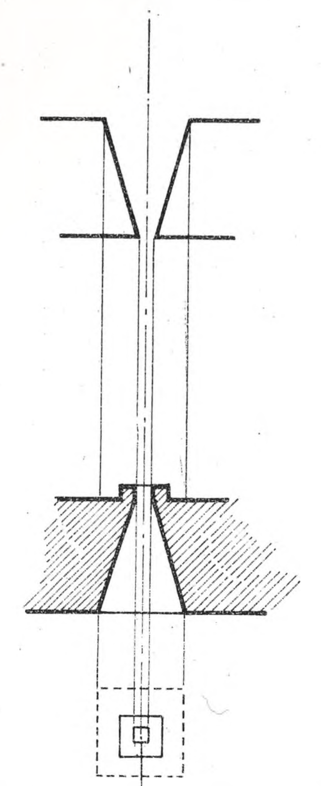
0.06 m. 0.34 3.518 m. 3.378 m. 0.14 0.14

0.42 0.47 m. 0.05

0.13 0.18 0.36 1.14 m. 0.36 0.018 1.27 m. 1.27 m. 0.018 0.36 1.14 m. 0.36 0.18 0.13

0.37 1.86 m. 2.636 m. 1.86 m. 0.37

3.56 m. 3.09 m. 0.54 0.53 0.50



The illumination opening of the causeway is a reversed form of the usual illumination openings.

SECTION A_1 - A_1

The original fragment of a part of a slab supported by the two cantilevers.

The two cantilevers sides of the newly reconstituted slab which supports the original fragment.

The original whole slab which has been found broken into two parts.

Hollow slab

Layer of artificial stone

SIDE VIEW

B

$A_{1,2}$ $A_{1,2}$

0.37 0.36 1.14 m. 0.36 1.148 m. 0.14 0.14 1.148 m. 0.36 1.14 m. 0.36 0.37

0.37 1.86 m. 1.288 m. 1.288 m. 1.86 m. 0.37

3.518 m. 3.518 m.

0.06 m.

7.105 m.

B

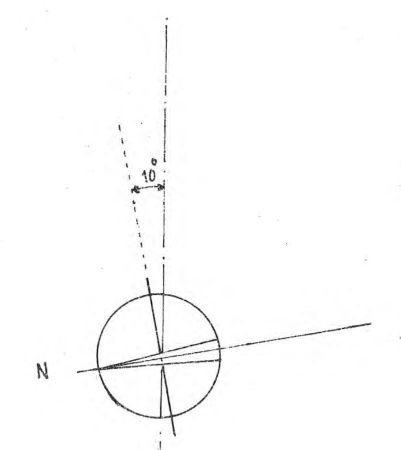




Fig. 7

M.RASLAN

The whole Causeway, with its three component parts, (flooring, walls and roof) was laid on the plateau rock which become its foundation. The surface of the rock however was not on a regular even plain. Where the rocky surface showed any sharp depression, the space was filled in with shaped blocks of stone and consolicated. Fig. 9.

(b) *Illumination* :

It is an established fact that any illumination of a causeway had to be dim, to make it all the more awe-inspiring to those destined to take part in the funerary procession of a royal burial . . . or anyone else who might return to the tomb later to perform any of the ritual . . . or the retainers servicing this funerary group (the pyramid Group). It was the course that took man from life to death . . . one end located in the green valley, the other in the atmosphere of the other world . . . with its mystery and secrets in the heart of the funerary temple.

The architect therefore saw to it in his design that light should only come in through a narrow opening in the axis of the Causeway roof (defined by the edges of the opposing roof slabs, at the axis of the road). In section it was an uncomplete pyramidical shape, the upper base of which was 0.37 meters, the lower 0.07 meters, the opening running along the length of the Causeway. Fig. 7.

However one thing which attracts attention, is that the opening was designed in such a manner as to cut out any possibility of the rays of the sun shining directly into the causeway (whatever its angle at any part of the year) from falling on any other part of the causeway but the floor. If any rays shone in, then they would only fall on the lower uncarved, bare edges. There appears to be no doubt whatever that what the ancient architect had in mind was :

(*i*) The Causeway be built to such a height so that the illumination opening could control the fall of the sun's rays... ensuring that they fall directly no further than the floor.

(*ii*) He wanted to avoid any direct sunlight on the carvings and paintings on the walls lest the light affect the colours and rob them, in time of their brilliance and sheen.

(*iii*) He wanted to display the carvings on the walls in a diffused indirect light reflected from the shining flooring of the Causeway. This kind of lighting would show up the carvings in their most delicate and best display. Fig. 8.

(c) *Reconstitution of parts of the Causeway ... and search for unknown landmarks:*

Reconstitution operations on any archeological finds are considered some of the most delicate of partical operations, the technique of which must be decided along practical and constructional lines. The choice of any given technique is dictated by the condition in which the archeological find is discovered. The technique is also decided by the academic and historical value of the object itself. In other words any given technique may be suitable for only one particular find ... but any not suit another relie found under different conditions. This means that there is no set rule or standers principle when it comes to reconstituting archeological finds. The whole matter entails dilight research ... to try and find an acceptable and sound solution which achieves the purpose of the reconstitution operation ... while at the same time making use of previous example and experience which set the main principles governing reconstitution, and which could always provide the first basis on which to start work.

The manner and technique are therefore dictated by the condition in which the find is discovered. This way be:

— The state of the find itself ... the strength of its material and whether it can stand treatment and reconstutution.

— The academic and historical value of the find ... and the volume of its pieces, as regards number and size and state of completion. Due to its historical value and uniqueness, for example, the few fragments may have to be reconstituted and completed with new elements materials lest it lose its features with the passage of time and the paucity of fragments (entrance to the Zoser Pyramid enclosure).

THE CAUSEWAY OF OUNAS PYRAMID

THE RECONSTITUTED PART OF THE CAUSEWAY

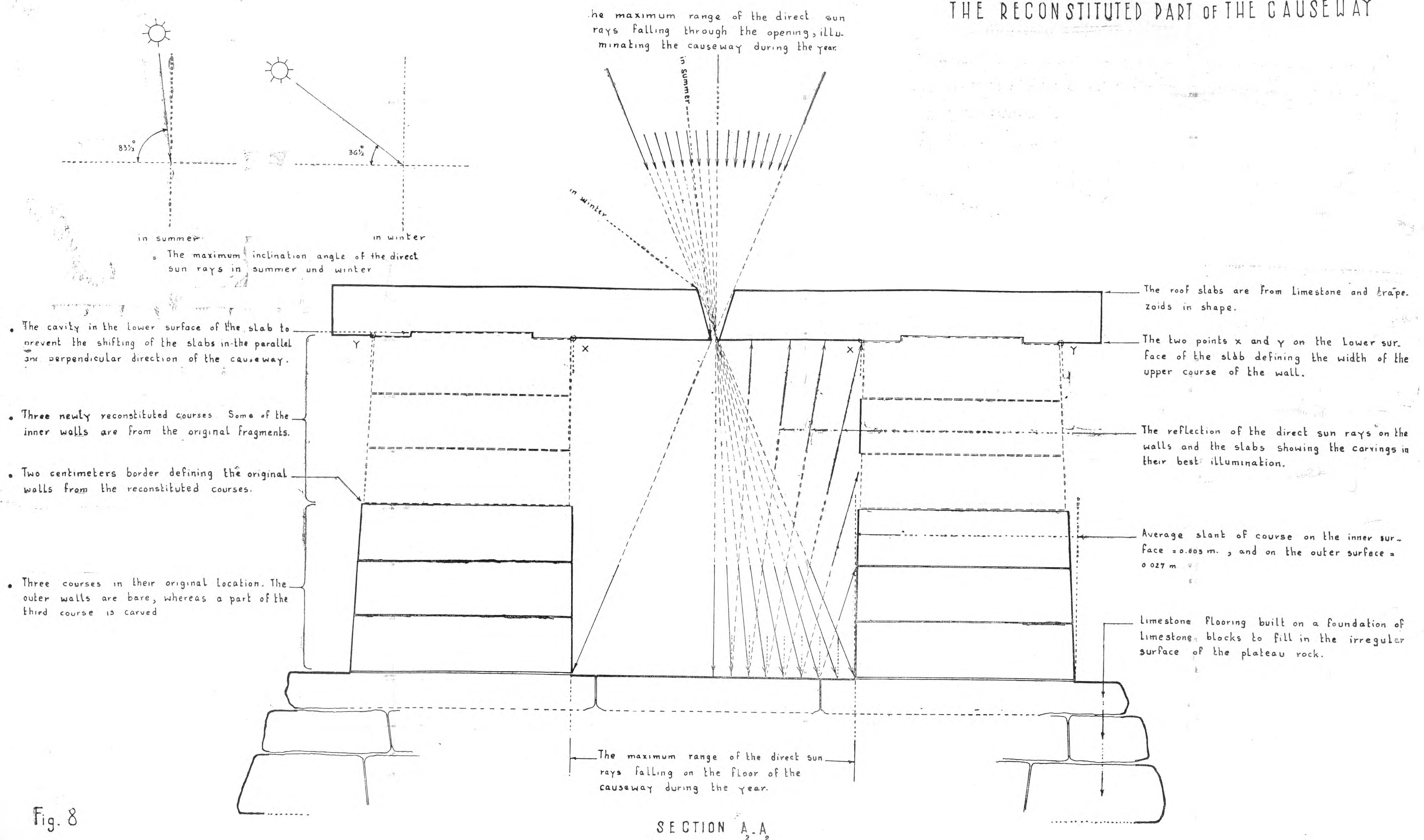


Fig. 8

1.20m. 0.0m. 1.00m. 2.00m

M.RASLAN

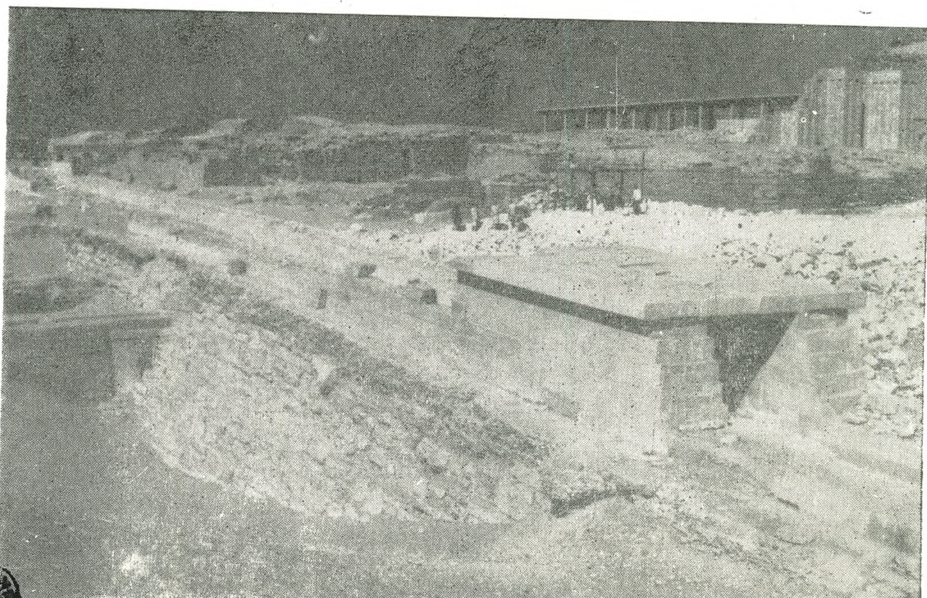


Fig. 9.—The foundation under the Causeway: Filling of the irregular parts with stone blocks to match the rock level under the Causeway.



Fig. 10 (*a*).—The column in the Valley Temple as it was found and before its reconstitution.



Fig. 10 (*b*).—Consolidation of the lower part of the column.

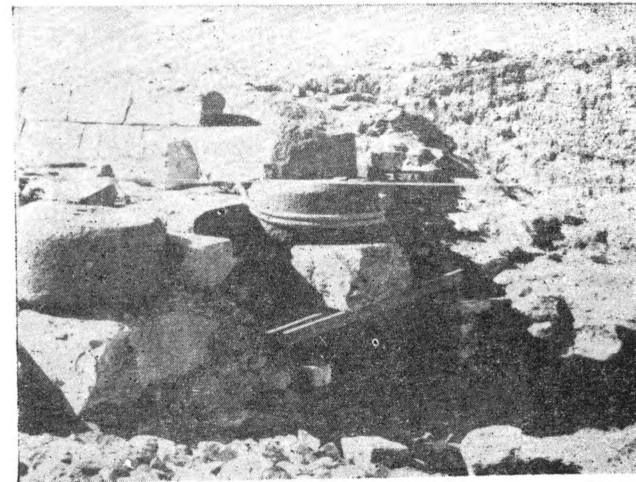


Fig. 10 (*c*).—Consolidation of the base foundation.

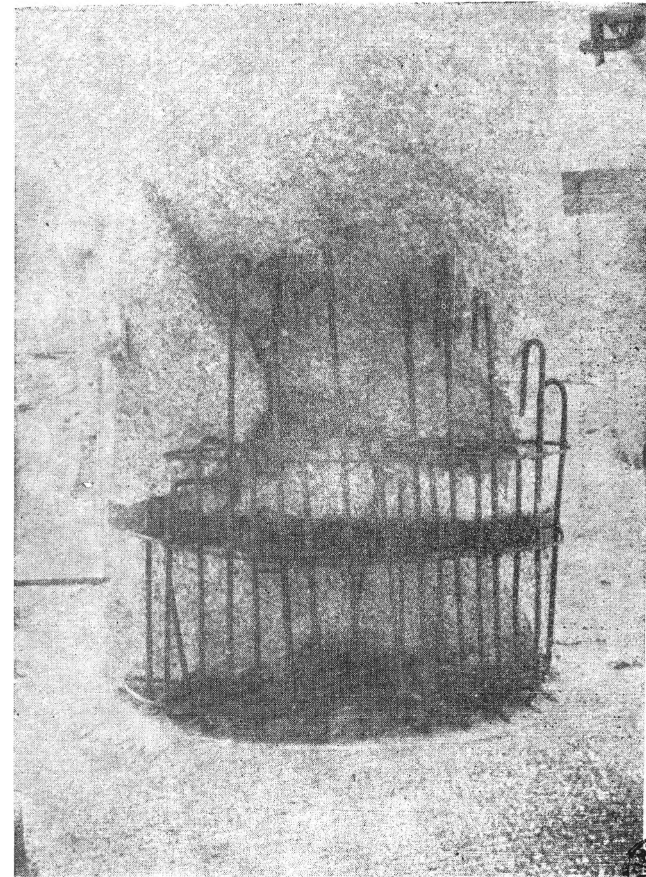


Fig. 10 (*d*).—Reconstitution of the middle part of the column.

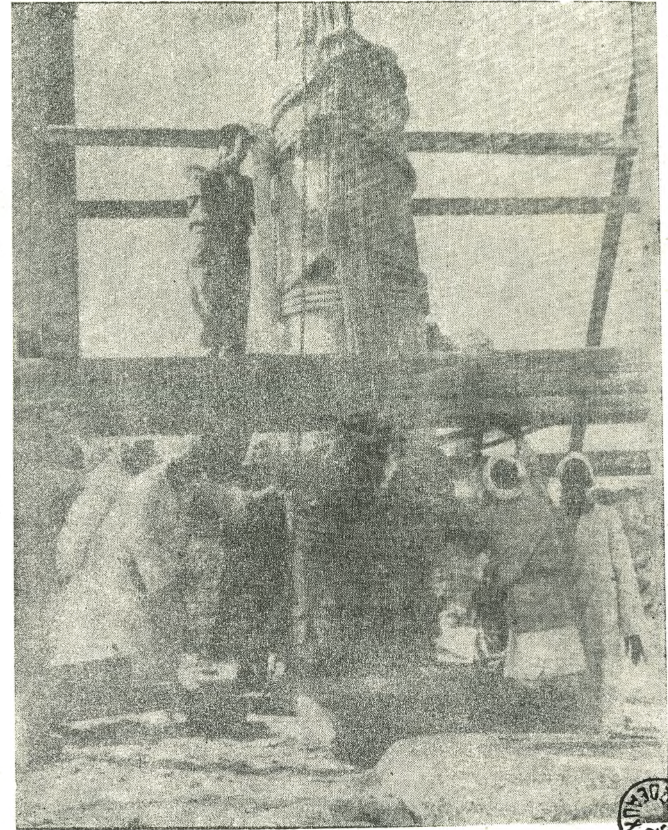


Fig. 10. (*e*).—Reconstitution of the middle part of the column

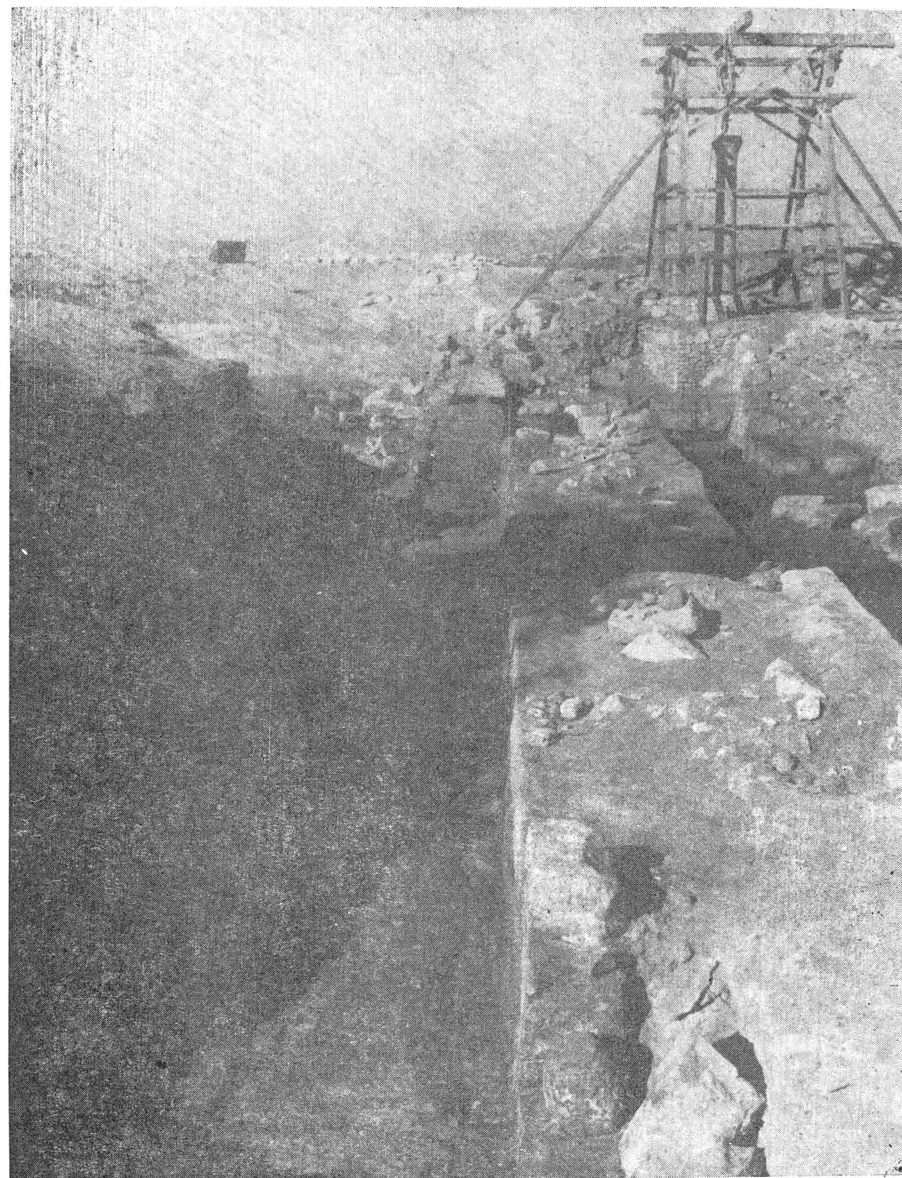


Fig. 10 (*f*).—Complete reconstitution operation of the column in relation to the southern part of the Valley Temple.

— Dispersal of the component fragments of the find over various areas, which could lead to deterioration (in damp locations or subject to seepage) – in this case the find is reconstituted and erected and with such counter-measures preserved ... and becomes an expression of its function (Valley Temple elements in this Pyramid Group). Fig. 10*a-f*.

— The reconstitution and erection of an archeological find recreates its overall entity, the viewer seeing it as ancient architect or engineer saw it originally. It goes without saying that this is far better than leaving its component fragments lying dispersed here and there (the Causeway subject of this paper).

— Reconstitution of a find can be considered as a remedy for its structural components ... allowing it to live on after the damage done by time and which has left its mark on the work.

It is these ideas which were the motive power urging study and reconstitution of the Causeway of this group. The design of the whole Causeway is cleary, defined as has previously been explained. Time has left us quite a good number of its elements in good condition ... there being whole parts complete. Furthermore it is architecturally unique.

(d) *Slant of the Causeway:*

From the illustration (Fig. 2) showing the course the Causeway followed, it will be noted that there are two points between the Valley and the Funerary Temples, where the Causeway took a bend. This divides the Causeway into three sectors, the bend of each increases as we approach the Valley Temple.

However it will also be noted that the slope or slant of each of the three sectors differs one from the other. The slope is greatest and most apparent at the sector that begins from the Valley Temple. It then gradually decreases between the two bends ... as we draw nearer to the Funerary Temple.

I believe that this was taken into consideration by the ancient Egyptian architect ... and was deliberately so designed on the assumption that anyone leaving the Valley Temple for the Funerary Temple, would find it easier to mount the slope in the early part of his walk. The incline then decreases as the walk gets longer and more tiring.

Therefore, the average incline of the flooring of the Causeway in the three sectors which mark its layout would be as follows:

1. Incline of the Causeway at the first sector (which begins where the Causeway connects with the Valley Temple in point (J) and the point where the second bend begins (f) is in two parts):

i) Incline of the Causeway between the points (g) and (j) - can be calculated from the difference of the level and the distance between the points (h) and (i).

$$= \frac{37.92 - 30.00}{580.00 - 498.00} = \frac{7.92}{82.00} \begin{array}{l} = 0.096 \text{ m./meter} \\ = 9.6 \text{ cm./meter} \end{array}$$

ii) Incline of the Causeway between the points (f) and (g) which as can be seen from the illustration follows the second bend in the Causeway.

$= 4.8$ cm./meter

2. Incline of the Causeway in its second sector: can be calculated from the difference of the level and the distance between the points (d) and (e).

$$= \frac{52.15 - 43.92}{363.00 - 192.00} = \frac{8.23}{171.00} \begin{array}{l} = 0.048 \text{ m./meter} \\ = 4.8 \text{ cm./metera} \end{array}$$

Note: It will be observed that the gradient of the second sector is half that of the first.

3. Incline of the Causeway in the third sector: can be calculated from the difference of the level and the distance between the points (a) and (b).

$$= \frac{55.36 - 54.52}{100.00 - 0.00} = \frac{00.84}{100.00} \begin{array}{l} = 0.0084 \text{ m./meter} \\ = 0.8 \text{ cm./meter} \end{array}$$

3. *Reconstitution and achitectural study*

The point of departure in this operation was to select a part of the Causeway in which the walls were as complete as possible... while at the same time taking care to ensure that the maximum number of the original elements of the Causeway which were discovered scattered along its route, were used to give the reconstituted work its original features and at the same time to show it complete and sound... as it used to be from the constructional architectural and functional points of view.

Work followed the following lines:

(a) *Defining the location*:

A 10-meter length of the Causeway was selected some (200 m) from the Funerary Temple, as is shown in the plan (Fig. 2) where the remains of its walls rose three courses (1.57 m) ... the heighest level of the walls discovered along the course of the whole Causeway. Fig. 4*a*

(b) *Defining the height of the Causeway*:

It was discovered that the thickness of the Causeway walls at their lowest edge (at floor level) was greater than further up (at the level of the roofing slabs). This would indicate that the walls leaned inwards (This is a well known feature of ancient Egyptian architecture... it gives greater firmness and stability. It was also revealed that the angle of incline was very slight on the inner surfaces, but more pronounced on the outer.

Twenty check measurements were made of the thickness of the wall at various points of the remnants of the Causeway walls. Average thickness was = 2.04 meters

It was then possible to define the thickness of the wall at its upper edge by measuring the distance between the two lines representing the surface of the outer and inner walls and which are obvious on the undersurface of the slab found whole (at points x and y) showing that the thickness of the wall at its upper edge

= 1.86 meters

— The difference between the thickness of the wall at its highest and lowest levels = 2.04 — 1.86 = 0.18 meters

The following measurements were taken from twenty various points and their mean averages taken ... they are :

— Height of course (between 0.50 and 0.53 meters) averaging = 0.515 meters

— Average slant of course on the inner surface = 0.003 meters

— Average slant of course on the outer surface = 0.027 meters

— Differential on one course = differential between upper and lower surface = 0.003+0.027 = 0.030 meters

The height of the Causeway was calculated as follows :

Number of courses

$$= \frac{\text{Differential between upper and lower thickness of wall}}{\text{Differential of thickness of wall from one course}}$$

$$= \frac{0.18}{0.03} \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot = 6 \text{ courses}$$

— Height of Causeway = 6×0.515 = 3.09 meters

Thus was the height of the Causeway calculated... and the following cross section charted. Fig. 7.

As a result of these conclusions the following facts became obvious :

— The direct rays of the sun (illumination) penetrated to light up the Causeway, through the upper appareture (uncomplete pyramidical shape), and which resulted from the edges of the roof slabs being parallel along the whole length of the Causeway.

— The furthest range of the direct rays of the sun passing through this opening... the year round, taking into account the varying azimuth ($83\frac{1}{2}^{o}$) in summer, and ($36\frac{1}{2}^{o}$) in winter could not go beyond the limits shown in the section (Fig. 8). The movement is confined to the area between the lines where the inner surfaces of walls of the Causeway meet the floor. Therefore no rays could fall directly from the sun on any of the inner surfaces of the walls (which are carved and coloured).

This means :

(a) The ancient Egyptian architect did not intend the sunlight to fall on any part of the walls that had been coloured... because he was fully aware that the colours would otherwise deteriorate. He therefore tried to avoid this hapenning (this is further confirmed by the fact that the ancient artists often tried to mask the coloured parts of their work on exposed surfaces.. even on the inner courtyard's wall of temples. They would often erect a roofing on columns in the form of ornamental doorways to prevent the direct rays of the sun from shinning on them.

(b) The ancient artist knew that the carved and coloured inscriptions on both sides of the Causeway could not appear at their best under direct illumination which would blur their relief. He avoided that and saw to it that the light fell on the extremely white and shinning flooring of the Causeway, to be reflected on the walls... bringing them out in their best illumination and clearest presentation.

(c) *Method of Reconstitution*

One primary consideration was how to make use of every useful original fragment of the remnants of the original Causeway, either in reconstituting the walls or the roofing. This concerned the part selected for reconstitution. The method of reconstitution and the techniques for reconstruction, would, it was decided, internal, masked, not apparent on

the surface as far as possible, so that there should be no deformation of the ancient monument, the remains of the find themselves being of paramount importance in the finished work. The repair work should as far as possible be either out of sight or in the background, hidden.

The reconstitution process covered two elements:

(a) *The Causeway walls*

The graffito which covered the inner walls of the Causeway (and which portrayed all worldly and temporal aspects of everyday life during the Pharoah's reign) had a very characteristic style in their layout and groupings. Each portion or fragment had its own specific place on the walls of the Causeway. There was a special section for illustrations representing crafts and industries... another for crops and harvesting and agriculture... yet another for entertainment and dancing... etc.

The fragments remaining from the structure, many as they were, were far too few for the surfaces involved. Indeed, it was an extremely difficult task to identify the fragments pertaining to the sector selected for this particular operation.

However, by means of defining the framework of borders of the various panels, or the height of the stone courses, it was possible to work out the position of the various stones in relation to the height of the Causeway (that is to say to identify the course from which each graffito came)

A pile of stones was then chosen, the illustrations on which were related to the graffito still in their original position in the third course of the reconstituted portion and which fits in to form one aspect of life's everyday activity to the left of the ascendor graffito representing ships and which it could be considered as highly probable that it belonged to this portion of the Causeway or was close to it.

The stones were set in their respective courses (not necessarily their original places) that is to say in their proper place in relation to the height of the Causeway. They were placed in their estimated positions withou tbeing fixed, so that all surfaces remained free, each block in a matching cavity so that in future should the opportunity arise of being able to positively identify the exact location of one of the blocks, it could be withdrawn and refitted, another block replacing it, and so on.. Fig. 6 a.

I was assisted in this sorting and arranging by our late Professor Dr. Selim Hassan, for he had been keeping the archives on the excavation since the Causeway was first discovered in 1938.

The interstices between the carved blocks and also the new walls were filled in with limestone blocks of the same type and to the same dimensions, leaving a 2 centimeter border between them and the original elements to identify them as new work, and for reconstitution purposes only. Fig. 8.

(b) *The roof slabs*

I have already mentioned that it was by sheer coincidence that a whole and complete roof slab was discovered (Fig.7) and this gave us a clue to the whole methodology involved in fixing the Causeway roofing... and its technical construction. Although it was broken in two, it was possible to reunite it internally and place it at the end of the south wall on the west, to show how it was fitted and stressed and interlocked into the upper course of the Causeway wall. The background of the slab is coloured blue and embellished with a regular pattern of five point stars representing the sky. Fig. II

A collection of fragments of these slabs... most of which were part of the graffito portions that roofed the Causeway, but were not angled (supported) onto the walls (each was about half a slab) was also discovered. It appeared from examination that the slabs were not of equal size of dimension... nor were they regularly rectangular. They varied in size but were rather closer to being trapezoids. The two parallel bases were edges of the slab, the height constituting each slab's length. Fig. 6 *b*, *c*.

It was possible to connect up each portion of these slabs, using another concealed concrete slab, and covered with a layer of artificial stone, supported by the wall of the Causeway and the fragment of the original affixed to it, so that when completed, the slab would look just as it did originally. This brought out part of the ancient painted ceiling, the rest of the slab (angling to) supported by the wall, showing only the outer edge of the slab overlooking the outer part of the Causeway.

The concrete slab was structurally designed as a cantilever to which the original fragment of the roof was affixed. The slabs were hollowed out, as they were fairly thick (about 0, 50 meters). The space was filled with a light concrete, so that the slab eventually looked like the original, while keeping it as light as possible, as it rested on the original walls and foundations. Fig. 7, Fig. 11, Fig. 12.

The method of mixing and casting the concrete slabs was an extremely delicate technical operation. They need a great deal of water to cast and must complete their chemical reaction to reach maximum cohesion (setting). However, the fixing of the original fragments was an even more hazardous operation (the slab was pre-cast outside the Causeway.. the original fragment attached and moulded at the same time, and then when dry, the whole taken in and fixed on site in the roofing). The part of the concrete slab that was to complete the original fragment was pinioned with two cantilevers attaching the slab to the original fragment, thus giving it full support and preventing any possible collapse.

It is a well known fact that the original fragments of the slab-the lower surfaces of which were carved and coloured-were carved out limestone which had become extremely dry with the ages. Its absorbent qualities were extremely high when any water to come into contact with them.

One real danger was that water from the concrete mix might come into contact with the original fragments on the casting and be absorbed, the carvings disintegrating and the colours deteriorating in consequence.

That is why the surfaces of the originals which were to come into contact with the concrete were given several coatings of silicates which isolated the two. Meticulous care

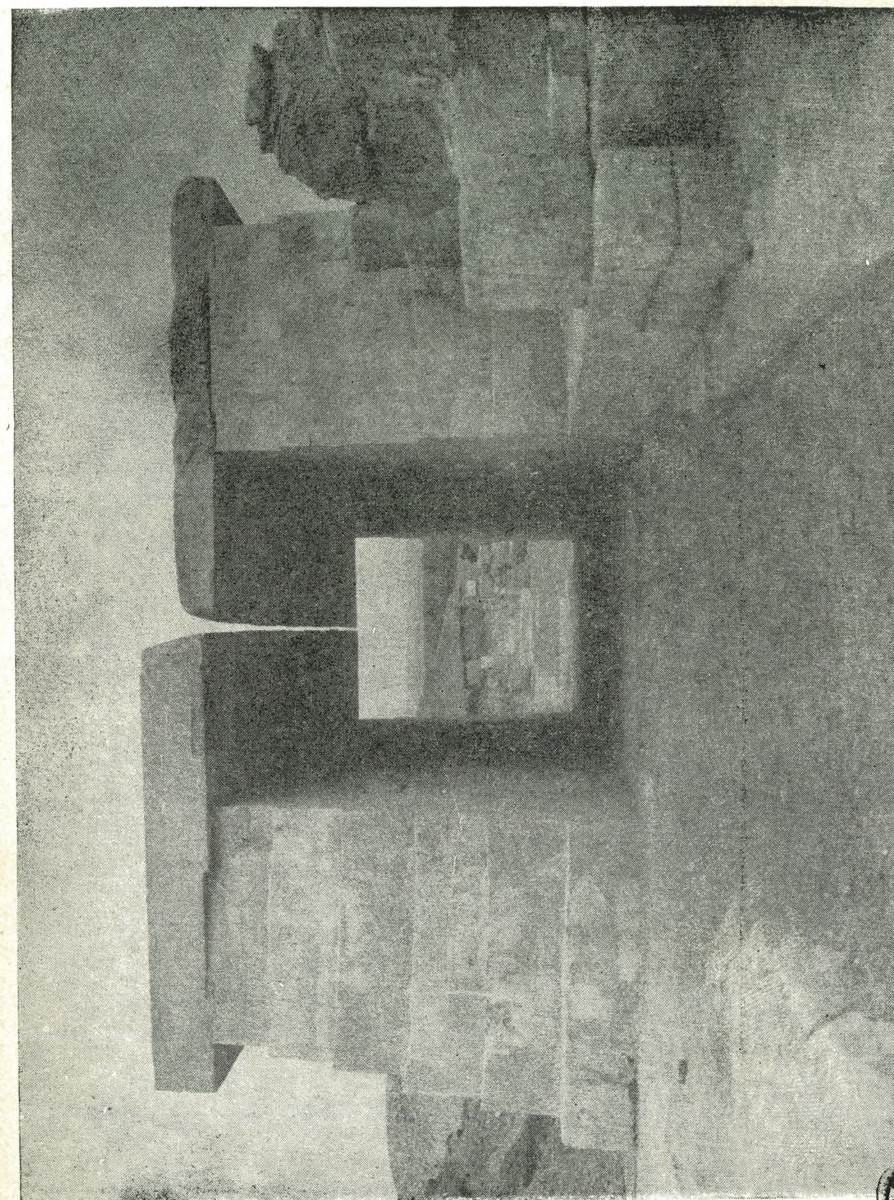


Fig. 11.—The final stage of the reconstitution operation of the Causeway showing the original slab and a new one fixed to the original fragment of the other slab.

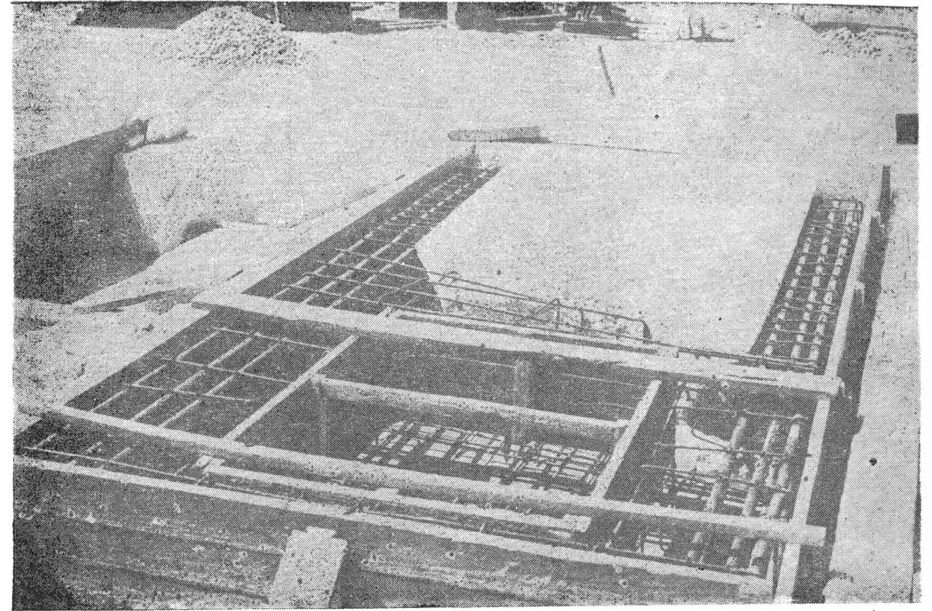


Fig. 12.—The joining of the original fragments to the new slab.

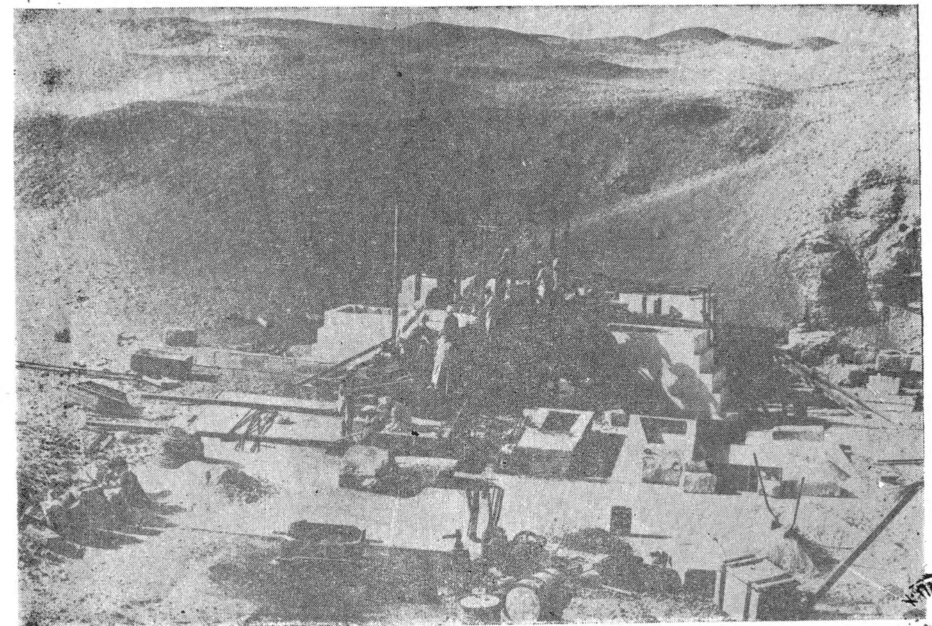


Fig. 13.—The moulding operation of the slabs. Two original slab's fragments can be noted, with a space in between for a new slab.

was taken when casting the concrete, to prevent any moisture finding its way to the original fragments. Fig. 7.

Since the original slabs were irregular (each one of the trapezoids differing from the other) it was very difficult to reconcile all the slabs (artificially completed) one to the other. That is why every two original forms were joined together in a single unit by a newly made complete slab (to take advantage of the ultimate harmony)-assuming, of course that each slab was in its proper place. Fig. 6 *b*, *c*, Fig. 13.

The whole of the ceiling was cast a little way out of the reconstitution site in a special compound set aside for the purpose so that each of the original part of the slabs affixed to a new concrete form, would be followed by a whole new slab and so on. Fig 13.

The roof of the north side of the Causeway is composed of ten slabs, the south of eight... which include the complete original slab... which was set in the west corner of the Causeway roofing. Fig. 6 *b*, *c*, Fig. 14 *a*, *b*

It was observed while studying this structural element of the Ounas pyramidical Group that the ancient Egyptian architect, in addition to his thorough know how of the architectural aspects and scientific and practical techniques.. also paid very special attention to economic factors.

He was fully aware that such mammoth structures needed colossal funds, materials, effort and energy. He therefore made maximum economic use of his building materials and manpower potential in a very logical manner. That is very well reflected in the way he used slabs for the roofing, in that he did not make them equidistant or identical. By using them in the form in which they were discovered, he knew he was making maximum use of the piece of rock which cost him so much to cut and transport to the site ... without having to waste too much of its mass... save that needed to trim and smooth it. Otherwise he would have had to waste a considerable part of each stone if he made them all equi-dimensional ... thereby increasing costs and proving ultimately uneconomical. Fig. 6 *b*, *c*.

The same thing is true of the stones used for the walls and floor which he sought to use in their original sizes as delivered, after smoothing them and trimming them to bring their edges into line. This meant that he had to cope with unsound stones or by affixing little appendages in place of the parts that were incomplete or unsatisfactory..., thus use the stone as a whole with all its surfaces and bulk. Fig. 6 a.

With this same argument in mind he knew that to transport the huge stones and raise them up to the higher levels (of the plateau) was an extremely arduous and difficult job... not to mention the tremendous efforts and energy needed to do so... without there being a specific structural and constructional objective.

That is why he used the larger and heavier stones at the lower levels of the building... using lesser and lesser heavy stones as he reached the higher levels. This can be observed in the stones used in the pyramid courses. The largest are the lower ones, gradually decreasing in size in the upper courses. Fig. 15.

When the Causeway was planned the architect did not want to waste his time breaking rocks... to get a straight road, but let it bend once and then twice... in a very logical and practical manner ... without giving himself too much trouble... since the bends would not rob the Causeway of any of its functional aspects. Fig. 2.

CONSLUSIONS

What we have brought out in this part of our study... be it in detail, explanation or by way of illustration leads us to summarise the following architectural, academic, and applied points :

1. The ancient Egyptian architect or engineere was fully convinced of the need for the structure to harmonise with the surrounding natural features... or any other buildings or structures in the vicinity. This was to ensure pure artistic harmony of composition for the structural group. He was

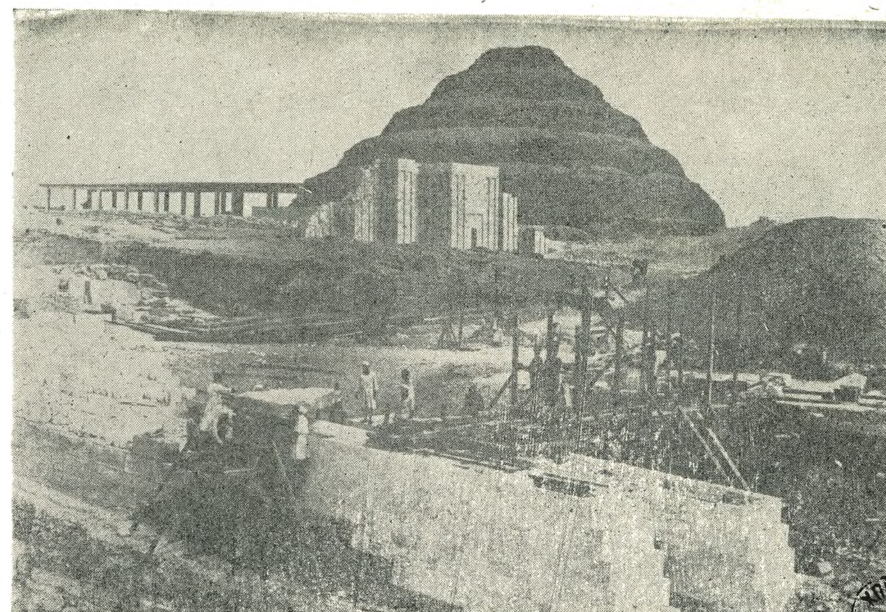


Fig. 14 (*a*).—Beginning of the roofing operation. The fixing of the original whole slab which has been found broken into two parts.

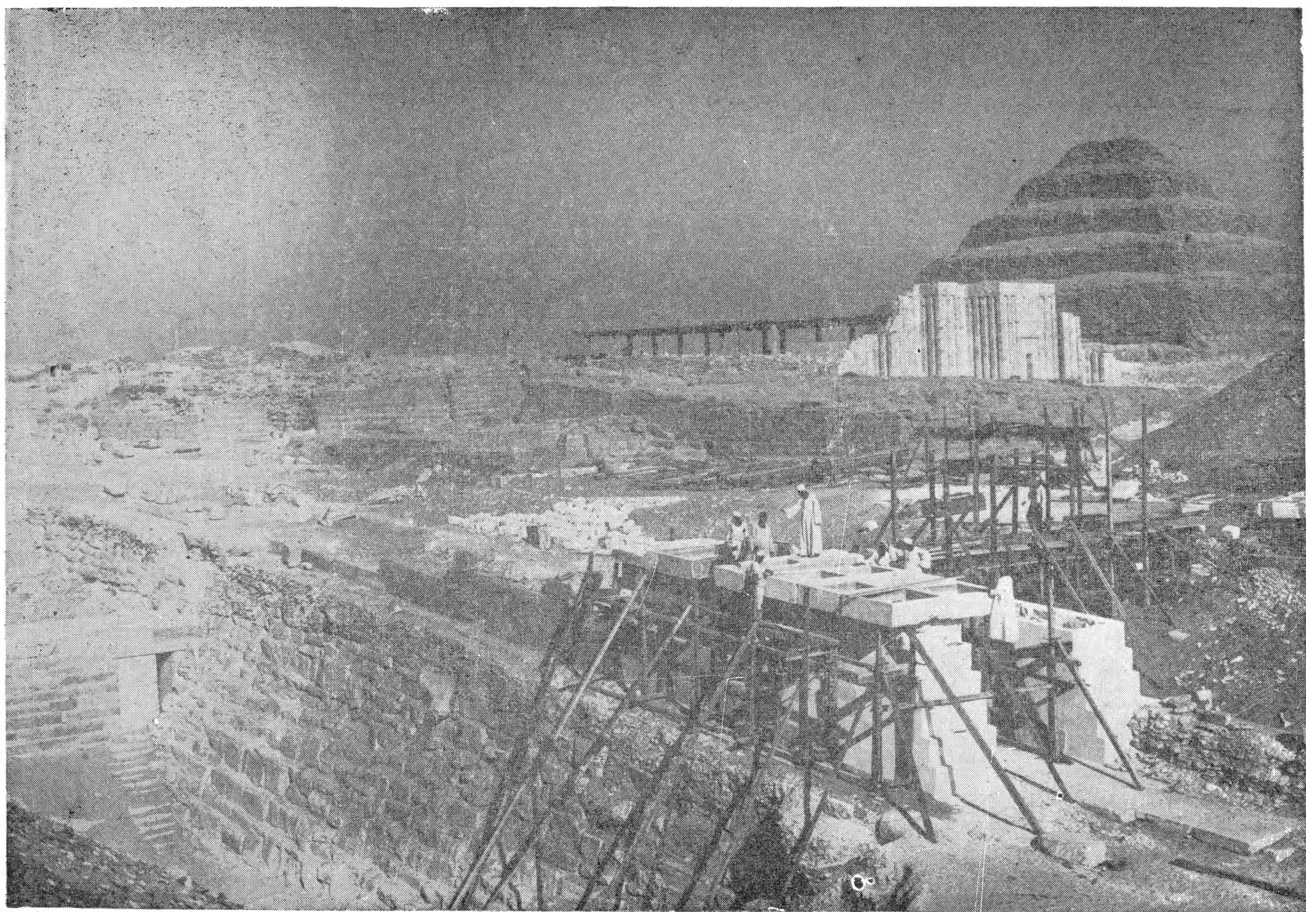


Fig. 14 (*b*).—The fixing of the roof of the southern part of the Causeway.

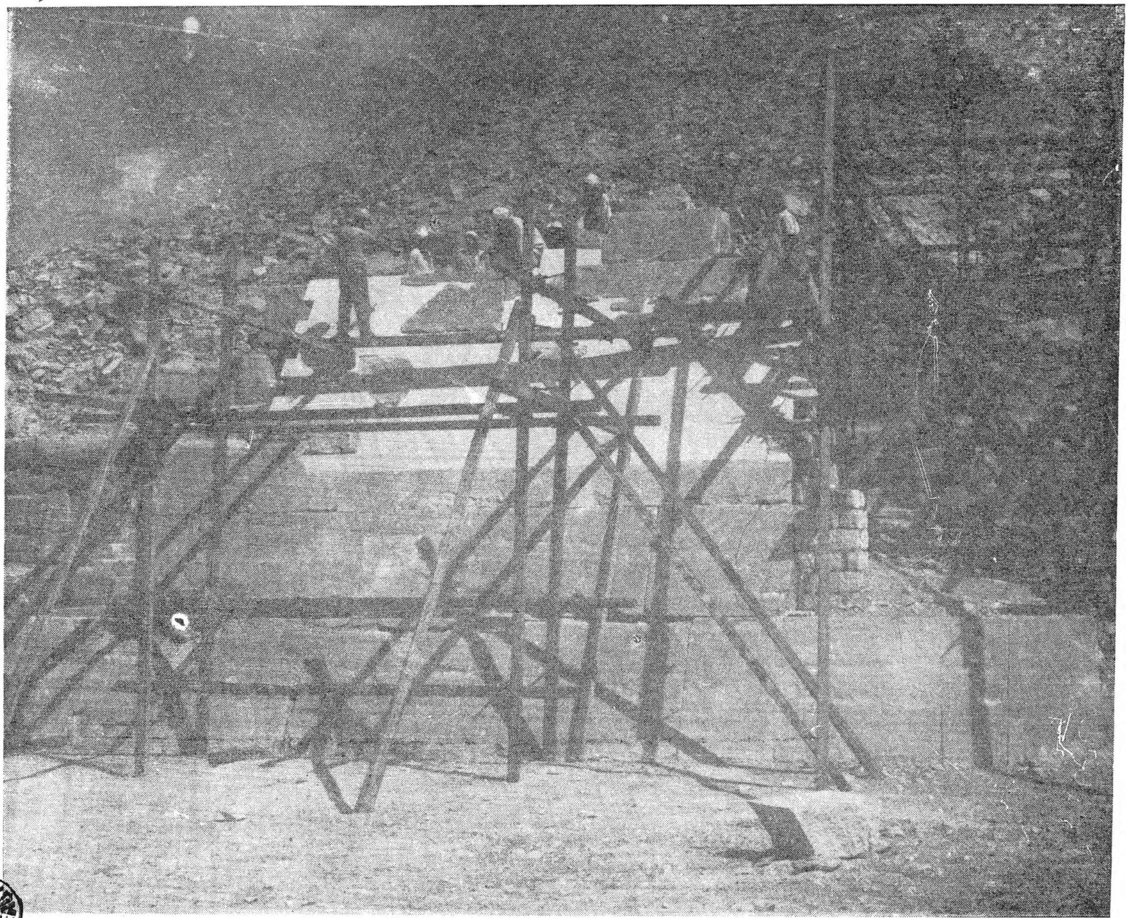


Fig. 15.—Reconstitution of the surface of the Ounas Pyramid : The practical and realistic out look of the Egyptian architect shown in the fact that bigger courses are topped by smaller ones.

no destroyer of nature's aesthetic beauty but added to it in the most ideal manner possible ... fusing his work into its embrace to become part and parcel of the landscape. Moreover in his technical approach he was both logical and consistent.

2. He was fully and very profoundly aware of his building materials and their characteristice and particulars and how best to use them. He was also meticulously honest in using the resources available to him to the best.

3. He was a genuine and very real constructional expert ... respecting his envireonment and its component elements. He was also a first class constructor... working in a kind of functional realism. He let not the least possibility of oversight affect his work over the ages. He allowed no possible margin to creep in without tackling it and dealing firmly with it.

4. He was an artist... involved in many fields of learning and art. We all know that constructional engineering and architecture embrace many a differing kind of art... carving, etching, colour, decoration. The ancient Egyptian architect was able to bring all these out at one and the same time.

5. He had a real and obvious concept of economic values ... making maximum use of the resources and potential available to him... and this is the hall mark of the real and genuine true architect.

Dr. Ing. M. Awad M. RASLAN

PRELIMINARY REPORT ON THE EXCAVATIONS OF THE DEPARTMENT OF ANTIQUITIES AT KOM EL ʿAMARNA, KARNAK

Seasons 1965/1966 and 1966/1967

BY

RAMADAN M. SAAD

Kom El ʿAmarna is a low hill that lies about 250 metres to the east of the exterior mud brick wall of the Temple of Amun at Karnak. (1) It is surrounded by the small houses of el-Nagʿ Al-Fouqani of the village of Karnak (Pl. I, *a* and *b* and pl. II.) (2)

When I was appointed inspector of Luxor and Karnak, I asked for a permission to dig this area. I started work on the 16*th* of April, 1966 and finished at the end of May of the same year. The work was resumed on the 15*th* of October, 1966 and ended on the 19*th* of November 1966.

During this short period, we were able to clear :

1. *In the first layer* : an area of 170.20 metres long from north to south, 52.50 metres wide on one side and 21 metres on the other side (Pl. III, *A*, *C*, *D*).
2. *In the second layer* : an area of 52 metres from north to south, 28.50 metres from east to west (Pl. III, *B*)

THE FIRST LAYER

When the work started to the north of the hill (Pl. I, b) a sandstone building was found. It resembles an unfinished gateway (A) built over a pavement of mud brick (Pl. I), 5.10 m. long and 5 metres being the width of the two jambs and the entrance (Pl. IV).

---

(1) About the other monuments to the east of the wall of the temple of Amon Rʿe, See, P.M., T.B., II, 89 A. ; P. Barguet, karnak, p. 7.

(2) L.D. Text, III, p. 38—40

The eastern jamb is 1.50 m. wide and the western jamb 1.80 m. while the entrance is 1.70 m. wide.

All the stones of this gateway are of reused blocks, and many of them bear inscriptions of special importance. Some of them, if not all, were taken from a temple of the XXVI Dynasty. The name of Psametichus II was found on three of these blocks. One of them bears the profile of Psametichus II wearing the Crown of Upper Egypt (Pl. V). The two other blocks are parts of a cornice decorated with the sun disk (Pl. VI).

Many other stones bear inscriptions of a king and various gods and goddesses (Pls. VII and VIII *a*).

Two of the stones bear the remains of scenes of the *Ḥb-sd* of a king. One of them was a lintel of a door (Pl. VIII *b*).

It is difficult to say when the gate was built, but some red bricks were found in the *débris* stamped with the name of the high priest of Amon "*mn ḫpr-Rʿ*" of the XXI at Dynasty which undoubtedly belongs to an older construction [1]. This shows that the gate was built later than the XXI st Dynasty, and it might have been built in the Ptolemaic Period.

The pavement of mud brick over which this gateway was built had been an anclosure wall of an older temple in the second layer.

To the south of the gateway, and on the same level, we cleared an area of 25 m. long - 28 m. wide (B). Nothing was found on the level of the gateway except the top of the mud brick wall mentioned above and the upper part of the pedestal which belongs to the second layer, and which we shall deal with in due time. [2]

To the south of this empty area we cleared a wide space (C) about 49.60 m. long from north to south and 32.70 m. from east to west on the north side, and 21 m. on the southern side. In this area was found a part of the foundation

(1) Gauthier, divre des roi III, pp. 263-8.

(2) S. P. 180.

of a temple, built of big blocks of sandstone, some of which have been reused. To the north was found the foundation of a long wall (about 19.20 m. long and 1.60 m. wide).

To the north of this corner, there are the foundations of three pillars :

1. 2.60 × 2.10 composed of 7 blocks
2. 2.30 × 1.70 composed of 5 blocks
3. 1.80 × 1.70 composed of 4 blocks



Fig. 1



Fig. 2

Under the foundation of the second pillar and in the *débris* was found a small rectangular piece of green faience 6 cm. × 3 cm. × 8 cm. with inscriptions on its two sides. On one side Fig. 1 (Pl. IX *b*) there are the names and titles of Ptolemy II. On the other side (Pl. IX *c*, Fig. 2) is the name of the queen, "the sister-wife of the King, Arsinoe Sat-Amon, the goddess, the sister, the beloved one". [1]

The south part of (C) is a large court about 32 m. long from north to south with remains of foundations of an unknown construction. A big block of sandstone has been found in this court bearing a part of the cartouche of Ptolemy III (Pl. IX *a*).

(1) Gauthier, Livre des rois, pp. 240-41

The far part in the south, which we cleared, is the area (D) about 19. 20 m. long from south to north, and 21 m. wide from east to west.

The foundation of a building consisting of a wall of at least three rooms, was also found. It was erected on brick walls which may be the walls of the second layer. Some stones were taken from earlier temples, and were reused in the foundation. A part of a papyriform iform column of the 18*th* Dynasty was also found in the foundation of one of the walls.

In the *débris* were found:

1. A small seal of burnt mud 5.2 × 3.5 representing a cobra with two horns and the sun disk. (P. X-*b*).
2. Two small bronze statuettes of Osiris, in bad condition, 8 cm. high (Pl. X-*a*).
3. A small bronze statuette of god Bes, in bad condition, 6 cm. high.

It is difficult to define the plan of this temple because the rest of it is not yet cleared out, and its continuation goes far to the south under the houses of El Nagʿ El Foukani. The features of all the elements found prove that it was a Ptolemaic temple.

THE SECOND LAYER

During the work in the first layer, the upper parts of the lower layer appeared and we had to dig deeper into the level of the second layer (Pl. III-*B*), about 52 m. from north to south, and 28.50 m. from east to west.

The result of the work is:

1. To the north and to the west were found the remains of a great panelled enclosure wall, (1) built of mud bricks, 5.20 m. wide. The part which has been cleared

(1) P. Barguet, Karnak, p. 30—31.

from the north side is 28.5 m. long and the rest of it is still under the *débris* of the eastern uncleared area (E). The western part at the corner has disappeared. Over this part of the enclosure wall, the gateway of the first layer (which was built of the stones of Psametichus II) was erected. (1)

A long part of the west wall (about 65 m.) has been cleared out, the rest still goes to the south under the *débris* of the south west side. The width of the wall in this side is 4.20 m. The height of the remaining part is 2 m. After 30 m. from the west north corner, there are remains of a gate in the wall which was once built of sandstone, and is now destroyed.

2. Inside the enclosure wall, there are remains of a temple floor of small blocks of sandstone. On the floor, was found a pedestal in good condition, built of small, polished blocks of sandstone (Pl. XII-*a*), with a cornice at the top (1.20 m. × 1.20 m. × 1 m.). To the east there is a small niche which might have been made for foundation deposits. At a distance of 4 m. to the south of the pedestal was found the base of two small columns with a narrow wall in between. The diameter of each base is 80 cm.

A part of another pedestal was found (Pl. XII-*b*). It is probably the pedestal of a sphinx, similar to that of the quay of the temple of Amun at Karnak.(2) Many other remains of a brick wall and ovens were found on the same level beside remains of granaries (Pl. XIII). In the *débris*, and near the first pedestal, was found a statue of a man, 30.5 × 22 × 15 cm., called Amonmose, of black granite. It is headless, kneeling, and its hands offering a stela inscribed with a long text. (Pls. XIV, XV).

The dorsal pillar and base bear a text which contains his name and titles. This statue is important because it has the same titles and name of Amonmose

(1) See, p. 178.

(2) P. Barguet, Karnak, p. 41.

who lived in the time of Amenhotep III whose tomb No. 89 at Sheikh' Abd el Gurna. (1). This statue will be dealt with in another article.

From the different elements found in the two layers, it seems that there was a temple in the second layer which may be from the 18*th* Dynasty. Over it, in the first layer, there was built an unfinished temple from the 30*th* Dynasty and Ptolemaic period, but it is difficult to decide on the plan of the two temples.

Ramadan Sa'ad

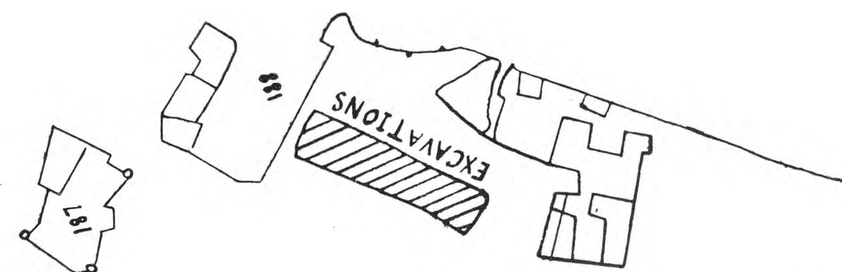
(1) P.M.T.B. Private tombs G 89.

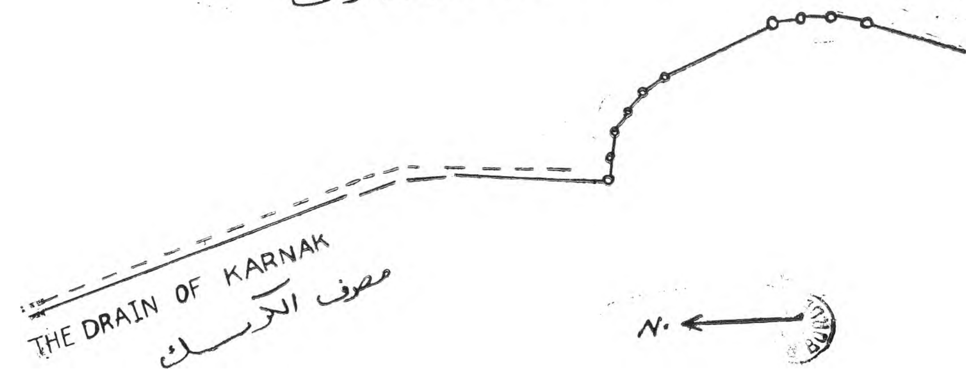


a.—The site before starting work, South side.



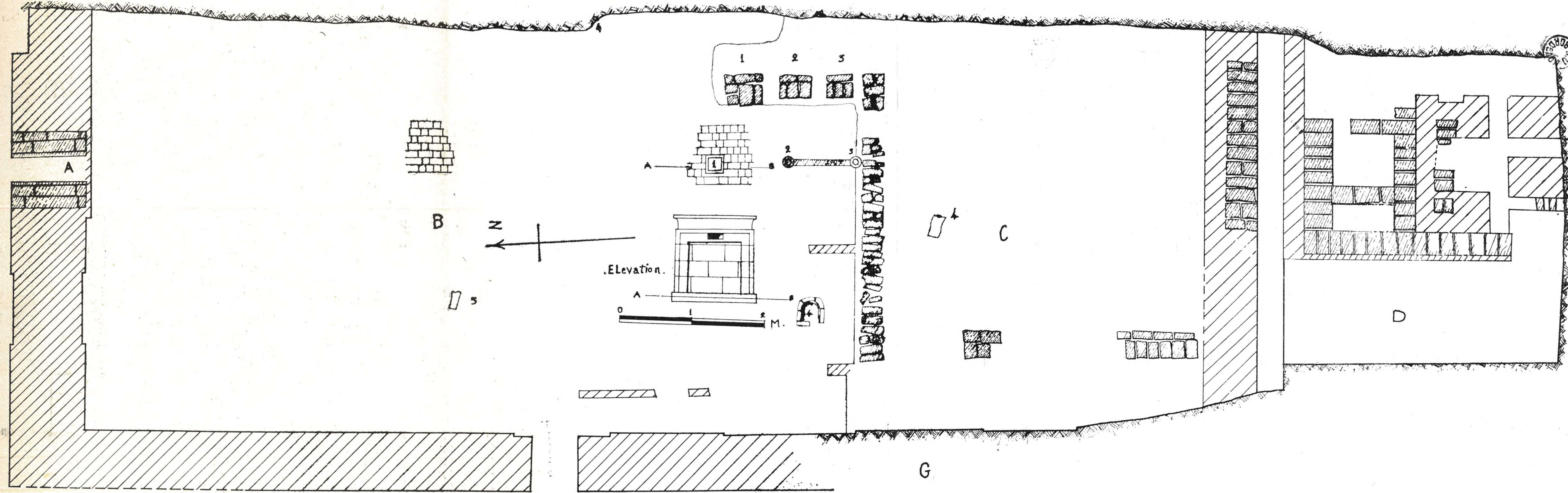
b.—The site before starting work, north side.





The excavations site

منطقة لم يتم الحفر فيها





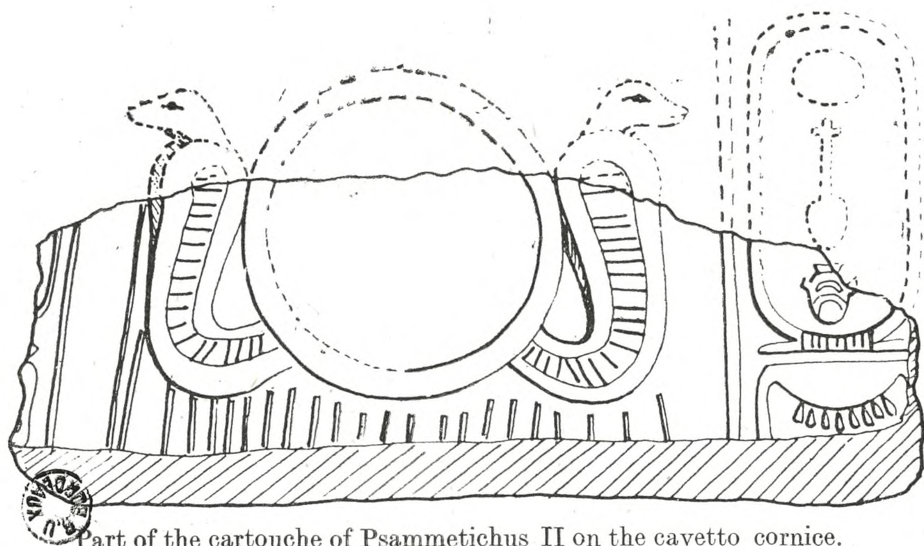
The gateway.

Pl. V



A block of sandstone with incised profile of Psametichus II.

Pl. VI



Part of the cartouche of Psammetichus II on the cavetto cornice.

Pl. VII

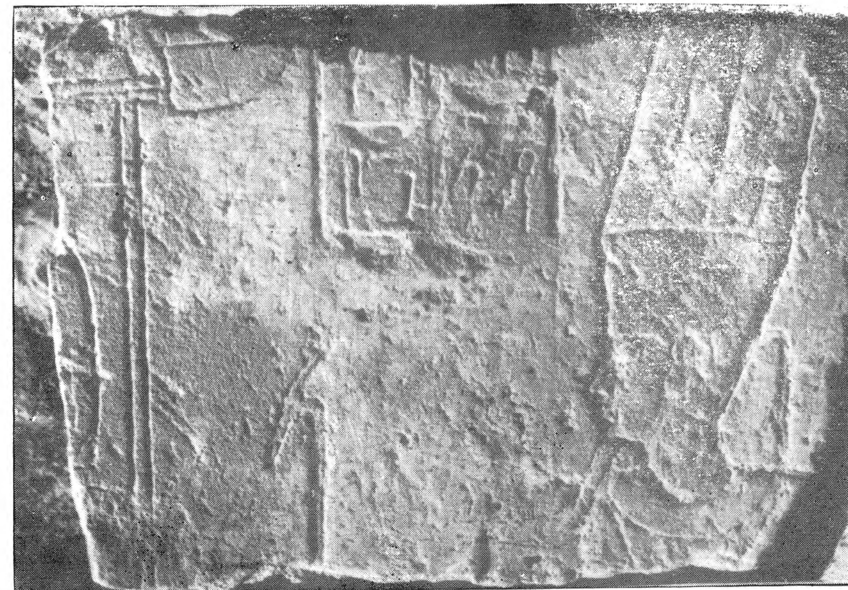


a.— A block of stone with two figures representing a king and a god

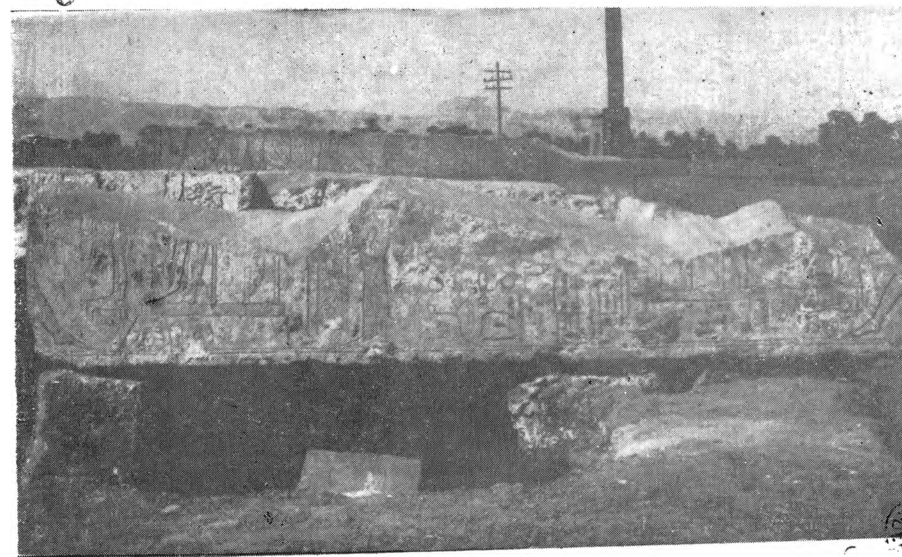




b.—A reused block of stone with incised figures representing a king standing between two deities.



a.—A reused block with incised profile of god Amūn.



b.—A reused block bearing a part of the *Hb-Sd*-ceremony.



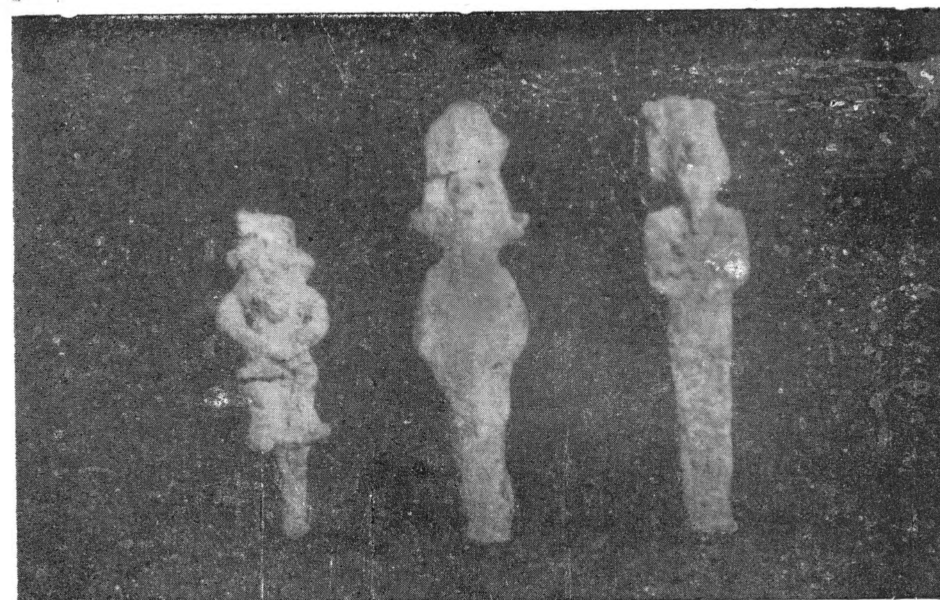
a.—A big block of sandstone bearing a part of the cartouche of Ptolemy III.



b.—One side of a rectangular piece of faience bearing the name of Queen Arsinoe and Sat-Amūn.



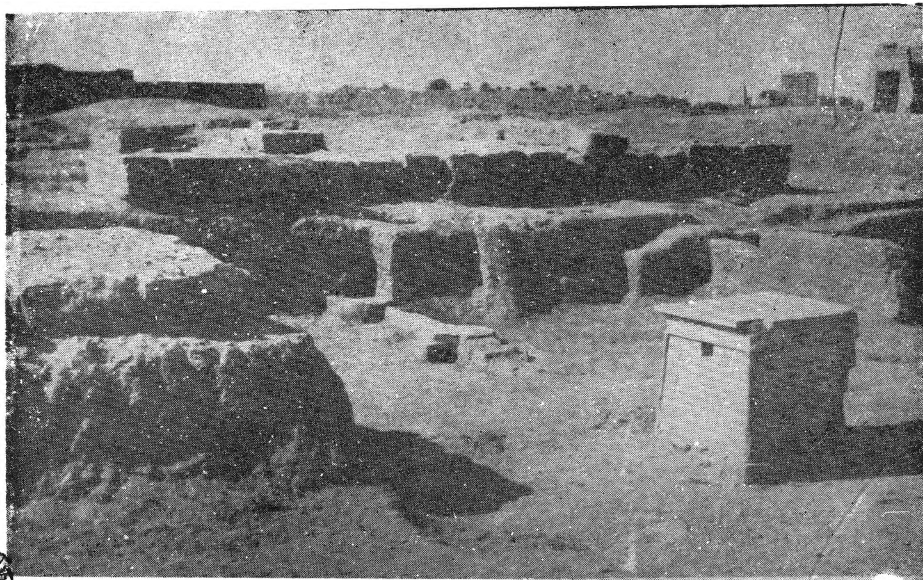
c.—The other side with the name of Ptolemy II.



Three bronze statuettes, two of Osiris, the third of Bes.



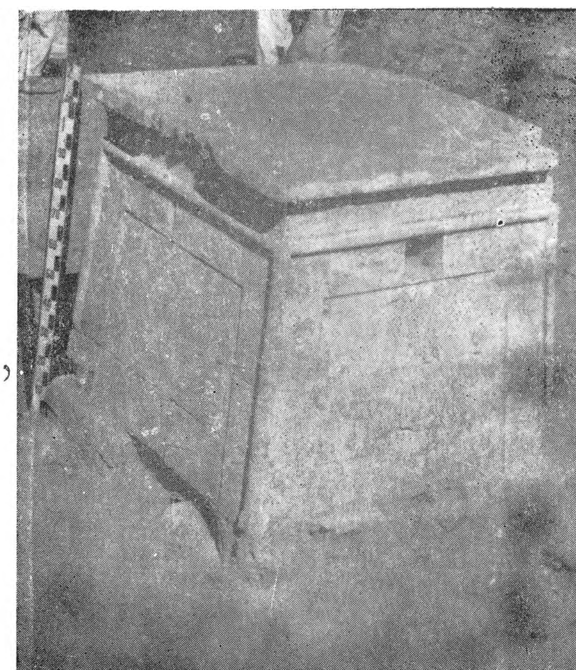
a.—A clay mould of a co[illegible]



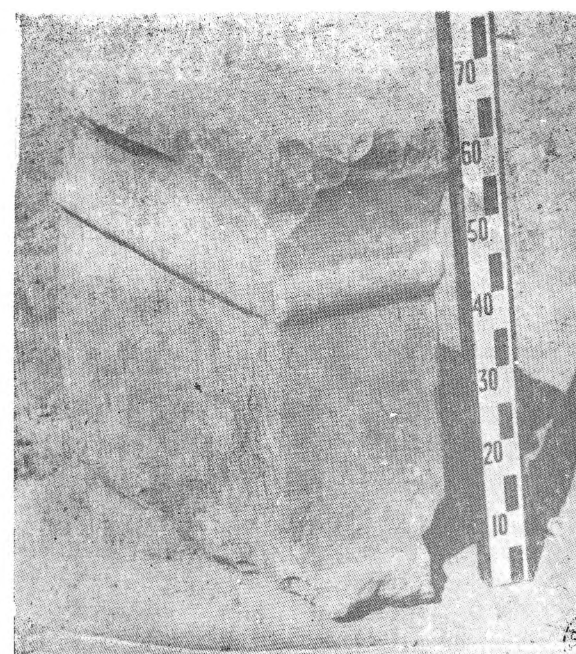


b.—The first and second layers at the end of the excavations.

Pl. XI



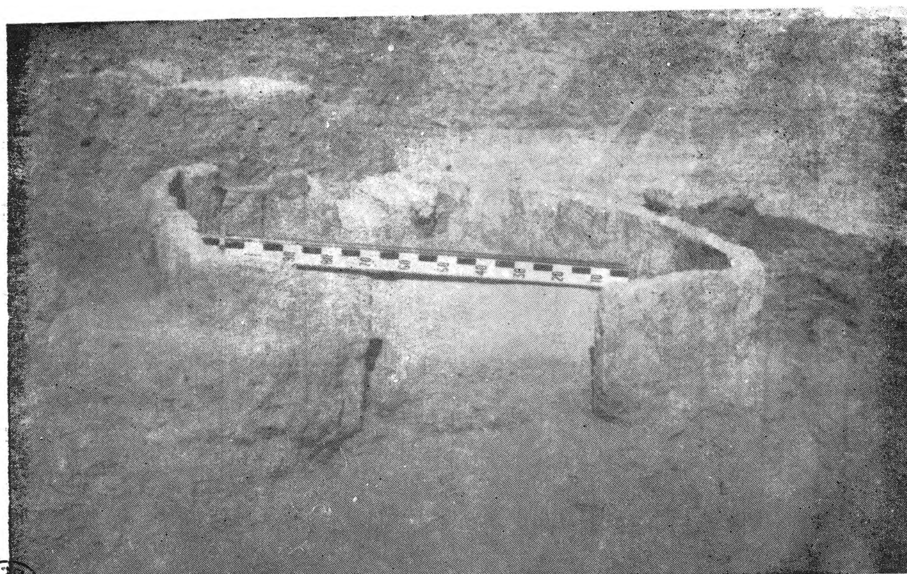
a.—An altar found in the second layer.





b.— The pedestal of a sphinx.

Pl. XIII

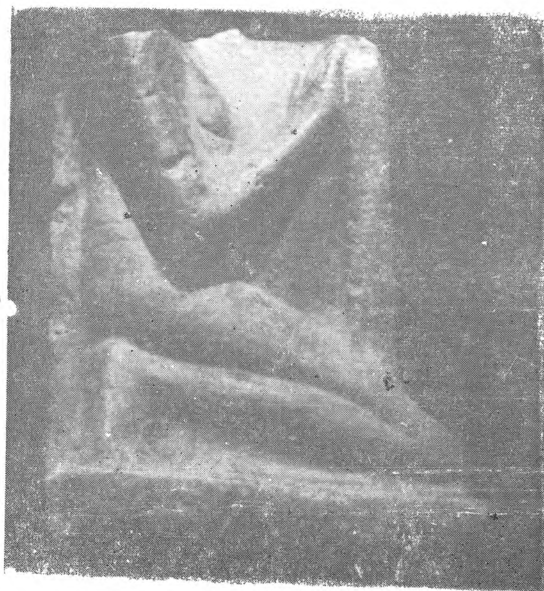


c.—The remains of a granary.





a.—The left side of the statue of Amonmose.

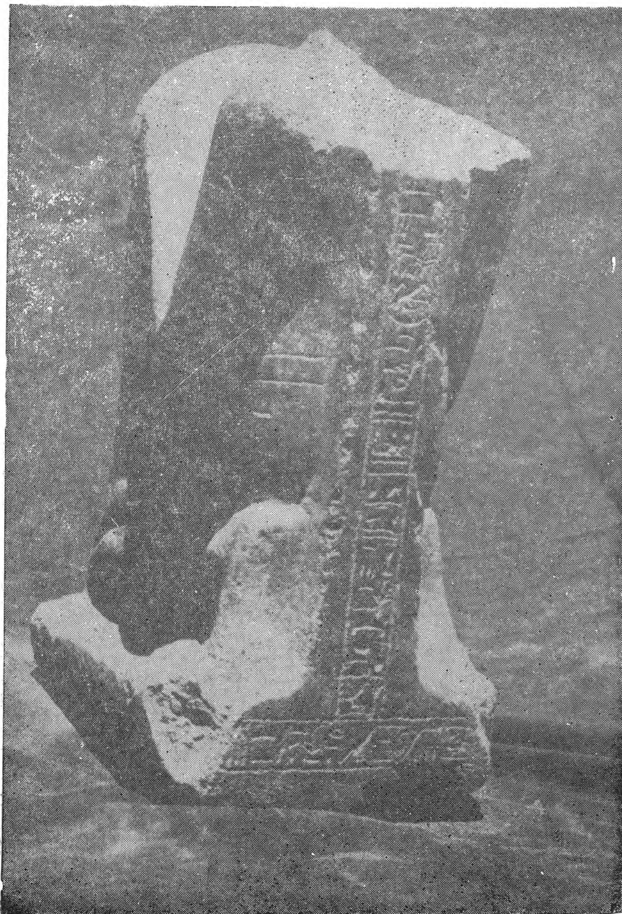


b.—The right side of the statue of Amonmose.

Pl. XIV



a.—The statue of Amonmose holding a stela



b.—The dorsal pillar of the statue of Amonmose.

Pl. XV

BERICHT ÜBER DIE ARBEITEN DES DEUTSCHEN ARCHÄOLOGISCHEN INSTITUTS KAIRO IN QURNA VON 1963 BIS 1970

VON

DIETER ARNOLD UND JÜRGEN SETTGAST

1. Das Grab des Jnj-jtj.f und seine Umgebung

Zu Beginn des Jahres 1963 gewährte die ägyptische Altertümerverwaltung dem Deutschen Archäologischen Insgtitut freundlicherweise die Konzession zur Untersuchung des im Asasif gelegenen Grabes des Jnj-jtj.f und seiner näheren Umgebung (Taf. Ia). Mit der Ausführung dieser Arbeiten wurden die beiden Berichterstatter beauftragt. Außer ihnen nahmen an der Grabung teil: Frau D. Arnold (Archäologin), K. Beck (Grafiker), D. Johannes (Fotograf), J. Lüdcke (Restaurator), J. Roewer (Fotograf) und W. Schiele (Fotograf). Mit der Bearbeitung des Materiales wurden darüberhinaus betraut: J. Assmann und Frau A. Assmann (Spätzeitgräber), D. Bidoli (Papyri und Ostraka) und W. Schenkel (Stelen der 11. Dynastie). Während des Berichtszeitraumes wurden in Qurna die folgenden Kampagnen durchgeführt:

1. Kampagne	3. 2.1963–11. 3.1963	Bericht: MDIK 20 (1965) 47–61
2. Kampagne	2.11.1963–15. 2.1964	
3. Kampagne	6.11.1964–28. 3.1965	Bericht: MDIK 21 (1966) 72–94
4. Kampagne	7. 1.1966– 1. 4.1966	Bericht: MDIK 22 (1967) 19–26
5. Kampagne	15.11.1966–11. 4.1967	Bericht: MDIK 23 (1968) 9–25
6. Kampagne	27. 1.1968–15. 4.1968	
7. Kampagne	1.11.1968– 2. 4.1969	Bericht: MDIK 26 (1970)
8. Kampagne	1.10.1969–10. 4.1970	Bericht: MDIK 27 (1971)

Die ägyptische Altertümerverwaltung war dabei durch die folgenden Inspektoren vertreten, denen an dieser Stelle für ihre freundliche Hilfsbereitschaft gedankt sei: Mahmud Abdel-Raziq, Girgis Daoud, Salaheddin Ramadan, Hashem el-Alfi, und Abdallah. Besonderer Dank gilt auch den jeweiligen Oberinspektoren von Oberägypten Dr. H.S. Bakri, Abd el-Hafiz und Ahmed el-Tahir, und besonders den Inspektoren von Qurna Ramadan Saad, Mohamed Saleh Aly und Abo Eleyon Barakat, die unsere Arbeit nach besten Kräften unterstützten.

Im folgenden seien die bisherigen Ergebnisse der Unternehmung in ihren Hauptpunkten zusammengefaβt, wobei die chronologische Gliederung des Materials in Mittleres, Neues Reich und Spätzeit bereits andeuten, daβ die drei Hauptepochen der thebanischen Nekropole durch die Denkmäler des Grabungsplatzes aufs beste repräsentiert wurden und eine auβerordentlich günstige Möglichkeit boten, deren gesamte Entwicklung genau zu verfolgen.

1.1. *Das Mittlere Reich*

1.1.1. Das Grab des Jnj-jtj.f (PM-Nr. 386)

Die älteste und gleichzeitig bedeutendste Anlage im Konzession sbereich ist das Grab des Jnj-jtjf., eines Truppenführers aus der Regierungszeit des König Mnṯw-ḥtp Nb-ḥpt-Rᶜ aus der 11. Dyn. Die Existenz des Grabes war zwar schon mit seiner Aufnahme in die Bibliographie von R. Moss seit 1959 dokumentiert, doch blieben seine Innenräume und Wandmalereien weiterhin unbekannt. Diese Anlage wurde nun während der 1. bis 4. Kampagne in ihren Hauptteilen freigelegt un näher untersucht. Dabei ergab sich, daβ das Grab in seiner endgültigen Form das Ergebnis verschiedener Planänderungen darstellt, die wie folgt verlaufen sein dürften.

(*a*) Zunächst wurde ein Felsengrab des saff-Typs mit einer 40 m breiten Front von 10 Pfeilern (Taf. Ia) und einem achsial gelegenen Korridor zur Kultkammer begonnen. Davor erstreckte sich ein etwa 47 m langer Vorhof, der an der südlichen Längsseite nur von einer starken Ziegelmauer, an der nördlichen von einer dem hier steil ansteigenden Felsen aufgesetzten Mauer begrenzt war.

(*b*) Nach Vollendung dieses Projektes wurde der Vorhof nach vorne um etwa 19 m verlängert und die neu hinzugewonnene Fläche durch eine entsprechende Erweiterung der älteren Mauer A eingeschlossen.

(*c*) Vor Vollendung dieses Projektes wurde eine neue, stärkere Abschluβmauer errichtet, die die ältere (B) unter sich begrub und dabei auch etwas schräg zu ihrer Vorgängerin verlief. Mit dieser Richtungsänderung der Hofmauer zusammen wurde auch die Richtung der Felsfassade des Grabes durch entsprechende Abarbeitungen leicht korrigiert.

(*d*) Als letzte Veränderung ist eine Verlegung des Eingangstores in den Vorhof zu erwähnen, das nun wesentlich aus der Grabachse nach Norden verschoben wird. Wahrscheinlich gleichzeitig wird neben dem von Phase A an vorhandenen Korridor mit der Hauptkultkammer ein zweites Korridorsystem südlich der Mittelachse des Grabes eingerichtet.

Die besondere Sorgfalt, mit der man den Vorhof des Grabes an seiner Süd-und Ostseite durch stets neue Ummauerungen schützte, sowie die Grabfassade drehte, kann nur durch die Nähe des Aufweges zum Tempel des Königs Mnṯw-ḥtp von Deir el-Bahari erklärt werden, der damals unmittelbar vor der Südostecke des Hofes angelegt wurde, und den Hof unter seinen Aufschüttungen zu begraben drohte. Schichtbeobachtungen haben zudem gezeigt, daβ die Arbeiten am Vorhof des Grabes und am Königlichen Aufweg etwa gleichzeitig durchgeführt

wurden oder genauer gesagt, mit einem kleinen zeitlichen Vorsprung des ersteren.

So wie sich die Architektur des Grabes durch eine nur von ganz wenigen MR-Gräbern erreichte Monumentalität auszeichnet, bieten auch seine Innenräume eine entsprechend reiche Ausstattung. Der Mittelkorridor und die sich anschließende Kultkammer waren mit Kalksteinblöcken verkleidet, die im Korridor mit fein ausgeführtem und bemaltem Relief, in der Kammer mit reiner Malerei geschmückt waren. Leider sind die Platten während der spätzeitlichen Wiederbenutzungsphase (s.u.) des Grabes herausgeschafft und zu Schüsseln verarbeitet worden, so daß jetzt nur noch zahllose Splitter und kleine Fragmente von der ehemaligen Pracht zeugen. (Taf. III *a*) Die Darstellungen waren wohl ausschließlich auf den Totenkult bezogen, zeigten Opferträger und-Listen, den Grabherrn stehend oder am Speisentisch sitzend, aber auchals ein frühes Beispiel besonders wichtig-einen Bestattungszug.

Besser erhalten und auch inhaltlich vielseitiger waren die Putzmalereien, die die drei Innenseiten der Frontpfeiler sowie die Wände des dahinter liegenden Querganges bedeckten. Nur vier Pfeiler haben sich erhalten und auch hier mußten die Malereien erst wieder mühsam gereinigt und gefestigt werden. Sie lieferten als interessanteste Szene eine ausführliche und vollständig erhaltene Darstellung eines Krieges zwischen Ägyptern und rothaarigen und gelbhäutigen Feinden, wobei die Ägypter und ihre nubischen Hilfstruppen u.a. mit einem auf Rädern fahrbaren Belagerungsturm gegen eine Festung vorgehen. Erwähnt seien weiterhin drei von ägyptischen und nubischen Soldaten besetzte Nilbarken, die gegen einen nicht dargestellten Gegner ziehen, dann eine ausführliche

Wüstenjagd, Fisch-und Vogelfang, landwirtschaftliche Szenen, Handwerker wie Schreiner, Metall-und Lederarbeiter sowie Friseure. In Wandnischen des Querganges, jeweils den Pfeilerdurchgängen gegenüber, waren ursprünglich neun Kalksteinstelen aufgestellt, die ebenfalls der saitischen Okkupation des Grabes zum Opfer fielen und nur noch durch zahlreiche Inschriftfragmente vertreten sind, die zwar in großen Zügen die Art der Stelentexte nicht aber deren genauen Wortlaut erkennen lassen.

Von der übrigen Einrichtung des Grabes haben sich nur noch geringe aber desto wichtigere Reste gefunden. An erster Stelle sei das Oberteil eines Sandsteinsitzbildes des Jnj-jtj.f erwähnt, das mit seinem wohlerhaltenen Kopf (Taf. II) zu den bedeutendsten Skulpturbeispielen der 11. Dynastie gerechnet werden muß (Ägyptisches Museum Kairo J'dE 89858). Die Sargkammer des Grabes war schon im Altertum Gräbraubern zum Opfer gefallen. Doch fanden sich hier noch die Reste eines mit Sargtexten beschriebenen Holzbettes (als Unterlage für die Leiche ?) des Jnj-jtj.f und eine besonders fein gearbeitete, dreiteilig zerlegbare Kopfstütze aus Alabaster. Außerdem lieferte das Grab zusammen mit dem später zu nennenden MR-Grab "T" eine große Menge von Keramik und Keramik-Scherben der 11. Dynastie.

1.1.2. Das Grab "T".

Am Berghang unmittelbar über dem Jnj-jtj.f-Grab wurde eine weitere ebenfalls aus der 11. Dynastie stammende Grabanlage entdeckt, die-da der Name des Besitzers nicht mit Sicherheit feststellbar ist, die laufende Nummer "T" erhielt. Das Grab gehört nicht dem Pfeilertyp an wie PM-Nr. 386, sondern einer pfeilerlosen Grabform mit sehr langem Tiefgang. Außer einer architektonisch recht interessanten Sargkammer besaß das

Grab mehrere Seitenkammern für Nachbestattungen, die aber alle-wie die reichen Keramikfunde zeigen-noch aus dem MR stammen müssen. Das Grab wurde schon sehr früh geplündert und verschütter und blieb somit frei von jenem alle Befunde verunklärenden späteren "Nekropolenschutt". An Funden sei die Holztüre eines kleinen Schreines erwähnt, auf der in feinster Schnitzarbeit die Figur eines Handwerksmeisters Hwj (vielleicht des Besitzers des Grabes "T"?) dargestellt ist.

1.1.3. Der Aufweg des Königs Mntw-htp Nb-htp-R^c.

Wie breits erwähnt, zieht unmittelbar südlich des Grabes des Jnj-jtj.f der Aufweg des Königs vorüber, der auf dieser Strecke näher untersuch werden konnte. Er bestand demzufolge aus einer 60 Ellen breiten Straβe, die mit einer doppelten Lage von groben, schwarzen Nilschlammziegeln gepflastert und darüber noch mit einer weiβen Kalkschicht verputzt war. Der Aufweg war auf beiden Seiten von einer oben abgerundeten Kalksteinmauer eingefaβt, die ihrerseits wieder eine niedrige Ziegelvormauer besaβ. Diese Vormauer wäre nun bei schnurgerader Straβenführung mit der Südostecke des Jnj-jtj.f-Grabes kollidiert. Um dies zu vermeiden, wurde nicht nur die Umfassungsmauer des Grabes entsprechend schräg zurückgenommen sondern auch jene Aufwegvormauer ihrerseits auf eine Strecke von etwa 27m unterbrochen. Darüberhinaus verlängerte man diese Mauerlücke noch so weit, daβ die Besucher des Grabes den Zwischenraum zwischen Aufweg-Vor-und Hauptmauer sozusagen als "Privat-Aufweg" benutzen und über eine Rampe hinab leichter zum Eingang des Grabes gelangen konnten.

1.2. *Das Neue Reich*

Unter Thutmosis III. wurde die Asasif-Landschaft durch die Anlage eines weiteren,

zum Tempel dieses Königs in Deir el-Bahari hinaufführenden Aufweges völlig verändert. Da dieser Aufweg genau über das Jnj-jtj.f-Grab hinwegführen sollte, muβte dessen Vorhof und Fassade bis zu 4 m tief mit Schutt aufgefüllt und die Fassade bis auf das Aufwegniveau abgearbeitet werden. Damit verschwand das MR-Grab für die Dauer des NR völlig und wäre-so geschützt-in hervorragendem Zustand erhalten worden, hätte man es nicht nach der 20. Dynastie wieder entdeckt und dabei groβteils verwüstet. Der Thutmosisaufweg ist zwar deutlichals Kopie seines älteren Nachbarn gedacht, besitzt aber weder Vormauern noch Ziegelpflaster. Von seinen Flankierungsmauern haben sich im Grabungsbereich noch Teile des Sandsteinfundamentes sowie hinreichende Reste des aufgehenden Mauerwerkes erhalten, um, ihren Verlauf genau zu rekonstruieren.

Wenig westlich der Pfeilerfassade des Grabes fanden sich in der Mitte der Aufwegsfläche Felsabarbeitungen sowie ein mit einer aufgeritzten Gebäudeecke bezeichneter Sandsteinblock, der als letztes Zeugnis von einer Barkenstation Thutmosis' III. in situ erhalten geblieben ist. Dieser kleine Bau wurde in nachramessidischer Zeit abgetragen und nur noch zahlreiche kleine Sandsteinsplitter lassen darauf schlieβen, daβ es sich um einen mit Statuen und bemalten Reliefs ausgestatteten Tempel mit Pfeilerumgang gehandelt haben muβ, An der Stelle der Barkenkapelle wurde auβerdem noch eine völlig unversehrte Gründungsgrube dieses Gebäudes entdeckt, die eine Fülle wohlerhaltener Beigaben enthielt (Taf. IV). Auβer einer repräsentativen Reihe von 88 Gefäβen fanden sich jeweils in Vierergruppen insgesamt 72 Modellgegenstände wie Ziegelformen, Erdhacken, Dechsel mit Bronzeblatt und Lederbindung, ebensolche Beile (Taf. IIb), Sägen, Meiβel, Stichel verschiedenster,

Form, Holzschlägel und Pflöcke, geflochtene Körbe und Siebe, Metallproben und Mustersteine mit blau aufgemalten Kartuschen des Königs sowie ein Karneolkettchen. Soweit es die Geräteform erlaubte, trugen die Gegenstände in die Holzgriffe eingeritzt oder in die Metallteille eingetrieben Weihinschriften, die die Gründungsgrube als zum Tempel des Amun von Dsr-3ht gehörig auswiesen. Drei weitere, allerdings restlos gepeünderte Gruben wurden ebenfalls in der Nähe gefunden.

Außer einigen Ostraka mit Arbeiterlisten aus dem Füllschutt des Aufweges und einiger Keramik von ebenda war das Neue Reich in unserem Konzessionsbereich nicht vertreten, da seit der Erbauung dieses neuen Aufweges der letzte noch freie Raum verbaut war und keine Grüber mehr angelegt werden konnten.

1.3. *Die Spatzeit*

Diese Situation ändert sich erst mit dem Ende der Ramessidenzeit als man sowohl die Tempel der Könige Mntw-htp und Thutmosis ; III. von Deir el-Bahari als auch deren Aufwege zum Abbruch freigab. Diese Arbeit wurde denn auch so gründlich besorgt, daß von den Aufwegsmauern, zumindest in unserem Grabungsgelände, wenig mehr als die mit Quarzsand gefüllten Fundamentgräben zurückgeblieben sind, sowie ein sich darüber breitender Haufen von Abbruchsschutt. In diesem jetzt wieder für die Anlage von Gräbern freigewordenen Gelände entstand nun eine Nekropole von dicht zusammengedrängten, mehr oder weniger großen Grabbauten, die wohl von der Bubastidenzeit bis in die Saitenzeit reichen. So reihen sich im Bereich des Jnj-jtj.f entlang der Nordseite des Grabes des Jnj-jtj.f sechs kleinere Grabbezirke ("A"-"F"), die allerdings fast keine

Inschriften und Darstellungen enthielten und- von Keramik abgesehen - keine bedeutenden Funde lieferten. Die älteste dieser Anlagen (Bezirk "B") liegt in der Mittelachse des 11-. Dynastie-Grabes und scheint der Anlaß zur Zerstörung der Innenräume jenes älteren Grabes gewesen zu sein. Die einzigen beiden Spätzeit-Gräber, die wesentlich aufwendiger als diese recht primitiven Bauten angelegt waren sind die der Mwt-jr-djs (PM-Nr. 410) und das des B3s3 (PM-Nr. 389), die im folgenden näher beschrieben seien.

1.3.1. Das Grab der Mwt-jr-djs (PM-Nr. 410)

Diese Grabanlage nimmt den südwestlichen Bereich der über dem Jnj-jtj.f-Grab entstandenen Spätzeitnekropole ein und gehört einer "obersten Gefolgsfrau der Gottesgemahlin, Mwt-jr-djs" an, die sich inschriftlich in die Regierungszeit Psametik I. datieren läßt. Die Oberbauten, auf einer hohen Schutterrasse über dem Niveau des Thutmosis-Aufweges errichtet, bestehen aus einer Folge von zwei Pylonen und den dahinterliegenden Höfen und einem dritten, ebenfalls pylonartigen Bau, durch den hindurch eine tonnenüberwölbte Treppe, in die unterirdischen Teile der Grab-Anlage hinabführt. Sie mündet auf einen kleinen Lichthof, der auf dem Niveau des Jnj-jtj.f-Grabes gelegen ist und als Südwestecke dessen Felsfronten benutzt. In der südlichen Seitenwand des Lichthofes öffnet sich der Eingang in die eigentlichen Innenräume, die aus einer Folge von drei Räumen und der ein Stockwerk tiefer liegenden Sargkammer bestehen. Von der Dekoration des Grabes haben sich beträchtliche Reste erhalten. Zunächst seien die Cones erwähnt die in mehreren Varianten erscheinen und sich wie folgt den beiden Eingangspylnonen zuweisen lassen : Pylon I Typ 48 und 603, Pylon II Typ 387 und 608 (nach

Davies-Macadam, Corpus of Inscribed Egyption Funerary Cones). Die beiden zugehörigen Tordurchgänge waren mit reliefierten Kalksteinplatten ausgekleidet, von denen sich einige Reste erhalten haben, besonders von einem dritten Türdurchgang, der in einer zum Lichthof hinabführenden Treppe eingebaut war. Die Treppe selbst trug in Putzmalerei an den Wänden eine Wiedergabe does Totenbuchkapitels 145, die noch in großen Partien erhalten ist, sowie pflanzliche Ornamente an der Decke, die sich nur noch zeichnerisch rekonstruieren lassen. Die nächste Bildfolge findet sich in Form von versenkten Reliefs an der Südwand des Lichthofes, wo in ausführlicher Form das Totenbuchkapitel 146 dargestellt ist. Auch die Wände und Decken der vier folgenden Innenräume des Grabes sind mit religiösen Texten und Darstellungen bedeckt, die insgesamt wohl nach einem wohldurchdachten Programm angelegt sind. Besondere Erwähnung verdienen Szenen aus dem Pfortenbuch in Raum I, eine astronomische Deckenmalerei in der Sargkammer sowie die Darstellung der Auferstehung des Osiris (wie sie aus dem Osireion Sethos' I, in Aybdos dem Grab Ramses' VI, und dem des Pdj-Jmn-Jpt bekannt ist) an der Rückwand der Sargekammer.

1. 3. 2. Das Grab des Basa (PM-Nr. 389).

Des Grab eines Basa, der unter anderem den Titel eines Bürgermeisters von Theben führte (Taf. VI a) ist etwas später als das der Mwt-jrdjs entstanden, aber sicher noch in der 26. Dynastie. Es war teieweise schon seit 1829 bekannt wurde aber in seiner vollen Ausdehnung est durch die Grabung von 1966-68 bekannt. Seine, zum größten Teil verschwundenen Oberbauten bestanden aus einem Eingangspylon im Osten, einem darauf

folgenden Vorhof und einer, den gesamten Grabbezirk umgebenden Umfassungsmauer. Am Westende des genannten Hofes führt durch einen zweiten Pylon hindurch eine Treppe in die unterirdischen Teile der Anlage, die aus einem System von Kammern, Gängen und Schächten besteht, das seinen verwinkelten Grundriß der Tatsache verdankt, daß seine Erbauer gezwungen waren, den Felsenkammern benachbarter Gräber, vor allem denen des Mwt-jr-djs-Grabes auszuweichen. Ein reiches Bild- und Textprogramm entfaltet sich in dem einzigen, besser erhaltenen Vorraum des Grabes (Taf. V,) der durch eine Säulenstellung in zwei Teile mit je einer Kultnische für die Hathorkuh und für Re-Harachte gegliedert ist. Reliefs und Inschriften sind ausschließlich religiösen Inhalts. Der sich anschließende Lichthof wurde zwar sehr sorgfältig ausgeführt aber leider nicht bis zur Beschriftung vollendet (Taf. VI*a*). Erst in dem nachfolgenden Rampenaufgang zum inneren Teil des Grabes sind wieder Reste von hervorragend modellierten Hochreliefs und Opferträgerprozessionen enthalten. In der sich anschließenden Kultkammer waren wohl alle Vollendungsstadien der Reliefarbeit vertreten. Doch sind hier die Wände bis auf geringe Reste Steinräubern zum Opfer gefallen. Alle folgenden Räume sind unbeschriftet.

In ptolemäisch-römischer Zeit wurde diese Spätzeit-Nekropole im Asasif erneut ein beliebter Bestattungsplatz. Im B3s3-Grab ist diese Wiederbenutzungsphase durch etwa zwölf rücksichtslos in Wände und Böden gebrochene, kleine und roh ausgeführte Grabkammern vertreten, die aber insofern von Interesse sind, als ihre graffitoartigen kurzen Inschriften zusammen mit den in Schutt gefundenen Sargfragmenten und dergleichen erlauben, als

ihre Besitzer eine größere Familie von nicht unbedeutenden Amunpriestern aus Karnak zu ermitteln.

Außer diesen und zahlreichen anderen Sargfragmenten und einigen vollständigen Särgen ist aus den Spätzeit-Gräbern des Konzessionsbereiches eine größere Menge von verworfenen und meist fragmentarischen Bestattungsresten erhalten, wie Uschebti und Uschebti-Kästen Stelen, Holzfiguren, Mumienbinden und-kartonagen, Amulette, sehr viel Keramik, zum Teil aus Beisetzungen von Mumifizierungsmaterial und schließlich eine größere Auswahl von Grabkegeln. Am ergiebigsten dürften jedoch die Reste verschiedener Totenbuch-Papyri aus ptolemäisch-römischer Zeit sein, die im Lichthof und einem Schacht des Mwt-jr-djs-Grabes gefunden wurden und die also ebenfalls jener letzten Wiederbenutzungsphase der Saitengräber angehörn müssen. Auch sie erlauben die Feststellung ihrer Besitzer, meist höher gestellte Kunsthandwerker.

Die Grabungstätigkeit im Konzessionsbereich ist nahezu abgeschlossen, die Bearbeitung und Veröffentlichung des Materials wird jedoch noch längere Zeit beanspruchen.

2.—Der Tempel des Königs Mntw-htp von Deir el-Bahari

1966 gewährte die ägyptische Altertümerverwaltung dem Deutschen Archäologischen Institut die Genehmigung zur Bearbeitung dieses, bereits durch frühere Expeditionen (E. Naville 1903-1907 und H.E. Winlock 1920-1931) ausgegraben, aber nicht ausreichend veröffentlichen Denkmals. Mit der Durchführung der Arbeit wurde D. Arnold beauftragt, der die Arbiten zusammen mit H. Fenner (Architekt), W.G. Legde (Grafiker) und D. Johannes (Fotograf) in den folgenden Jahren in Angriff nahm. Die Unternehmung hatte einmal eine Aufnahme und Beschreibung der Architektur der Anlage zum Ziel. Zu diesem Zweck mußte die mittlerweile

versandete Ruine wieder gereinigt und von den umherliegenden Architekturfragmenten befreit werden. Aus dieser Arbeit, die inzwischen abgeschlossen ist, wird unter anderem ein neuer, teilweise von den früheren abweichender Rekonstruktionsvorschlag resultieren.

Im Frühjahr 1970 wurde im Zusammenhang mit diesen baugeschichtlichen Untersuchungen unter allen vier Ecken des Kernteiles des Tempels je eine, völlig unversehrte Gründungsgrube entdeckt. Ihre Beigaben unterschieden sich nicht nur von jenen durch H.E. Winlock unter den vier Ecken der Tempelterrasse gefundenen Gruben sondern in manchem überhaupt von allen bisher aus Gründungsgruben stammenden Objekten (Taf. VII). Am auffälligsten sind zwei etwa 30 cm lange Szepter (?) aus blauer Fayence von unbekannter Funktion. Ebenso ungewöhnlich sind zahlreiche kleine, aus Bronzeblech geschnittene, hieroglyphenförmige Figuren, die Männer, Frauen, Rinder, Opfertische und Wasserbecken darstellen. Außerdem enthielten die Gruben ungewöhnlich große Mengen von Leintüchern, die bis zu 18 m Länge messen. Sie waren mit der Besitztumsmarke des Königs Mntw-ḥtp gekennzeichnet, einige trugen aber stattdessen den Namen des Königs Jnj-jtj-f ꜥ3 (Horus W3ḥ-ꜥnḫ), also des Großvaters des Tempelgründers. Die restlichen Beigaben fügten sich eher in den Rahmen des üblichen : Fayence-Gefäße und zugehörige Gefäßständer, Beil-, Meißel- und Dechselklingen aus Bronze, blaue Fayence-Perlen und -Ketten und schließlich Opfergaben wie Rinderrippen, Gazellenbeine, Vogelköpfe und Brote.

Ein zweites Arbeitsvorhaben bestand in der Untersuchung der zahlreichen, bisher nicht ausgewerteten Relief-Reste des Tempels. Dazu mußten mehrere Auslandsreisen unternommen werden, um das in zahlreiche europäische und amerikanische Museen gelangte Material ausfindig zu machen und aufzunehmen. Der gößte Teil der Fragmente lag jedoch noch ungeschützt im tempelbereich und mußte zunächst geordnet und in Magazinen in Sicherheit gebracht werden bis die zeichnerische Aufnahme erfolgen konnte (Taf. VIb). Als Ergebnis wird eine zeichnerische Rekonstruktion einiger Partien der Tempelwände angestrebt, so vor allem die des Sanktuars, von dem besonders zahlreiche Fragmente erhalten

sind aber auch von Bildszenen wie einer grossen Kriegsdarstellung mit der Belagerung einer Festung, der Unterwerfung der Feinde durch den König und Sphingen, eine Wüsten- und eine Nilpferdjagd, Vogel- und Fischfang, Bootsfahrten (kultischer Art), Papyrus- und Ackerbauszenen sowie schliesslich verschiedene religiöse Szenen wie z.B. auch aus dem Hebsed.

Während jetzt die Aufnahmetätigkeit nahezu abgeschlossen ist, wird die Zusammensetzung der Fragmente noch einige Zeit in Anspruch nehmen.

Neben dieser Arbeit lief noch die Reinigung der Gräber der Königinnen Tm und Kmsjt (PM-Nr. 308 im Bereich des Tempels, wobei in der letzteren auch Restaurierungsarbeiten durchgeführt werden mussten, für die die Restauratoren des Inspektorats zur Verfügung standen.

3.—Die Jnj-jtj. f-Gräber von El-Tarif

In der gleichen Zeit wurden zu Vergleichszwecken in den Grabanlagen der drei Vorgänger des Königs Mntw-htp im Norden von Qurna beim Dorfe el-Tarif Vermessungsarbeiten durchgeführt. Diese vorläufige Aufnahme der saff-Gräber der drei Zwischenzeit-Herrscher (Horus) : Shr-t3wj, W3h-cnh und Nht-nb-tp-nfr ergab zunächst, dass entgegen der allgemein herrschenden Vorstellung kein entwicklungsgeschichtlicher Zusammenhang zwischen diesen Anlagen und dem Mntw-htp-Tempel bestand, Zum anderen zeigte die Unternehmung aber auch, wie dringend genauere Untersuchungen in diesen, zwar längst ausgeraubten aber noch nie wissenschaftlich bearbeiteten Gräbern durchgeführt werden müssen. Die Konzession dafür wurde dem Deutschen Archäologischen Institut von der ägyptischen Altertümerverwaltung erstmasl zum Winter 1970/71 erteilt.



(*a*) Pfeilerfront des Grabes des Jnj-jtj. f



(*b*) Umgebung des Grabes des Jnj-jtj. f



Sandsteinkopf des Jnj- jtj. f (Ägyptishes Museum Kairo 89858)



(*a*) Relieffragment aus dem Grab des Jnj-jtj. f (11. Dyn.)

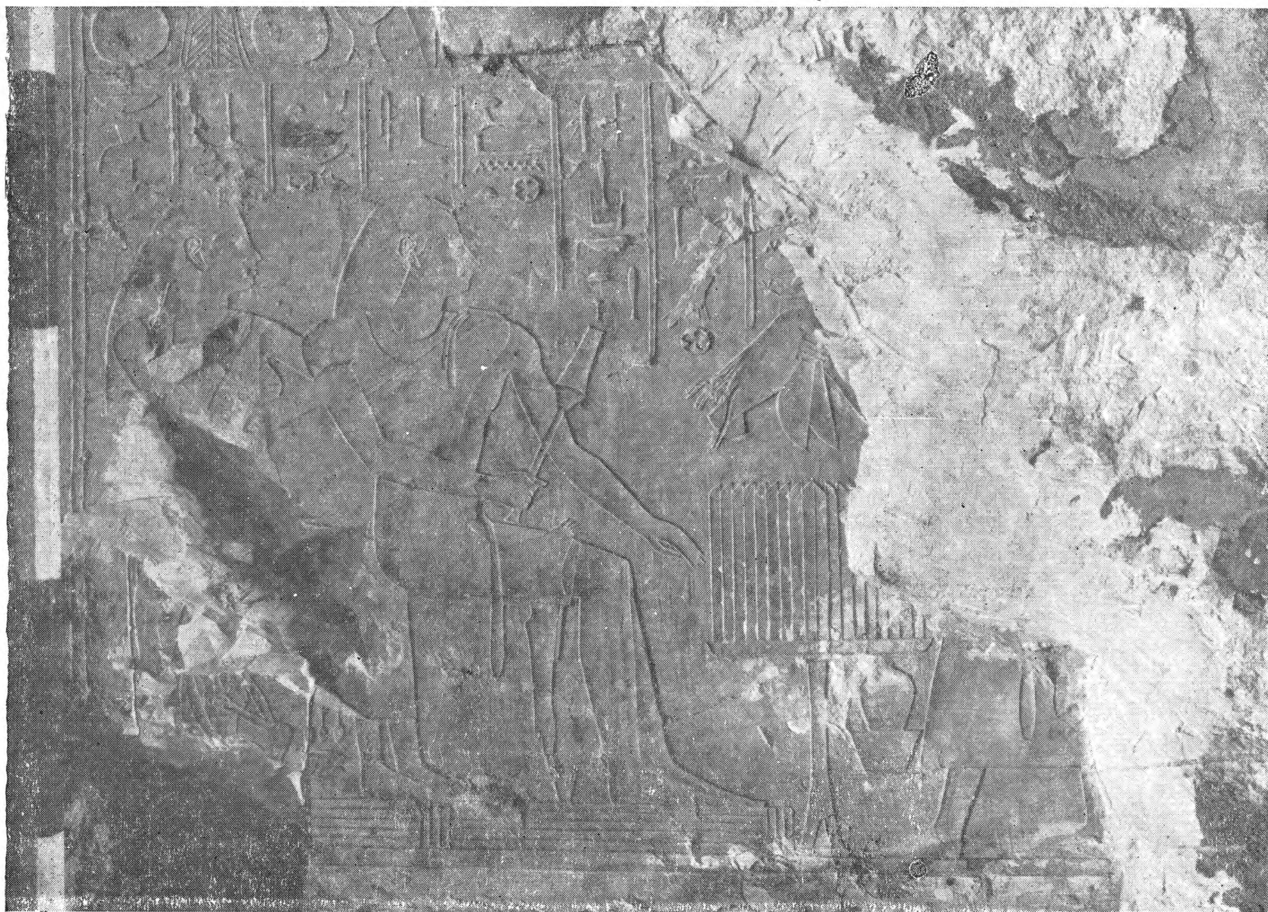


(*b*) Axt-Modelle aus Gründungsgrube Thutmosis' III.

Pl. III (*a*, *b*)



Gründungsgrube Thutmosis' III.



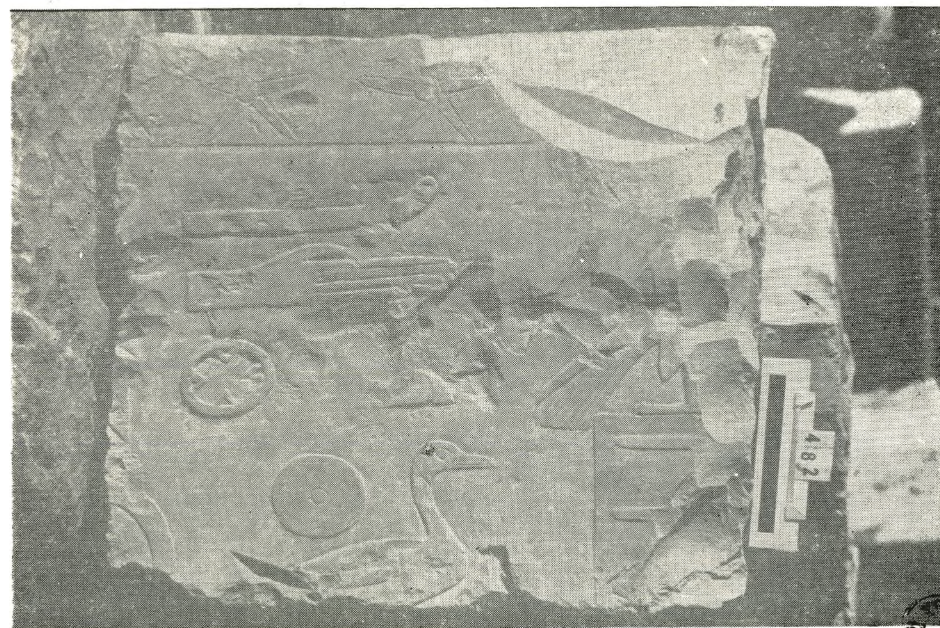
Wandrelief im Grab des Basa (Nr. 389)

Pl. V

Pl. VI



(*a*) Hof des Basa-Grabes (Nr. 389)



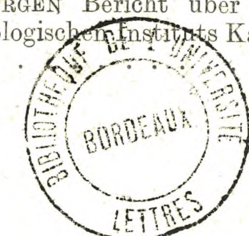
(*b*) Relieffragment aus dem Mntw-htp-Tempel von Deir el-Bahari



Gründungsgrube aus des Mntw-htp-Tempel von Deir el-Bahari

TABLE DES MATIÈRES





PRINTED IN ARAB REPUBLIC OF EGYPT
BY THE GENERAL ORGANIZATION
FOR GOVT. PRINTING OFFICES. CAIRO
First Under-Secretary of State
ALY SULTAN ALY
Chairman of the Board of Directors

9486–1970–800

A.R.E. National Library Legal Deposit No. 508–72



1973

9486-1970-800 ex.